

British officers. When we returned to the boats we found that most of the crew and several of our servants were away; but having at last retrieved them, all in a more or less intoxicated condition, we once more set sail for the south. Next day we landed on Abba Island, which is about 30 miles long and well-wooded. We saw so many birds there that I determined to collect them on my return, but was prevented from doing so, many of my men being down with fever. On the 10th we stopped near Jebel Ain, one of the few hills which relieve the monotony of the White Nile scenery. The peaks rise abruptly from the plain and are formed of granite. We climbed up the largest hill, and, in doing so, saw a great many Guinea-fowl (*Numida ptilorhyncha*), while from the top we had a good view of the surrounding country, which was densely covered with acacia as far as we could see. Here we observed several herds of gazelles (*Gazella rufifrons*).

Several miles south of Jebel Ain we saw the tracks of elephants, which evidently came to the river to drink. On the 14th we arrived opposite Jebel Ahmed-Agha, another granite hill, and here one of the crew died. He had caught a chill after a too liberal bout of merissa at El-Kawa and contracted pneumonia. The native treatment finished him.

There was much wailing at his death, and the rias asked for cloth to bury him in, though he had plenty himself. A shallow trench sufficed for the grave, and the poor fellow's body was buried half an hour after he died. Next day we stopped at the camp of Lord St. Oswald and Mr. Willie James, the latter a well-known traveller in North-east Africa. They had had very little sport, and, unluckily, just after we left them, Mr. James contracted dysentery and was obliged to return to Khartum.

South of Jebel Ahmed-Agha big game was plentiful, and we saw buffalo, lion, roan antelope, waterbuck, and giraffe. We arrived at Kaka on the 24th, and met the Swedish Expedition under Dr. Jäegerskiöld. They were collecting in all branches of zoology, the doctor being chiefly interested in parasites. Dr. Innes, of the Cairo Medical School, was

with them, and did us a good turn by prescribing for Mr. Cheetham, who had got a touch of the sun. We unloaded our transport-animals here, and I started off inland to have a look at the country. The path led through dense acacia-jungle, and we had to cut our way through it in many places. We camped at a swamp swarming with Ducks, chiefly Garganeys and Shovellers. The water was only about six inches deep, and was filthy with green slime and alive with all sorts of insects.

Next day we marched on and camped at another swamp, on which there were no Ducks at all, though Marabou-Storks were in large flocks. These birds, after drinking in the evening, marched off solemnly to some trees about half a mile distant from the swamp and flopped up into them to roost. The country consisted of a large plain covered with grass interspersed with belts of acacia. As there were very few birds, I returned to Kaka and sailed south, while the transport-animals were marched along the banks of the river. We now came in touch with the Dinkas, a fine race of people, who, though they thought clothes unnecessary, were very civil and pleasant. On the 20th we arrived at Fashoda. This place consists of the remains of an old Egyptian fort, to which Captain Marchand added a mud bastion facing the river and named "Bastion des Anglais." It was on a swamp and surrounded by swamps, while some Shilluk villages were built on dry ground near it. The country west of the fort in the dry season is a large plain with belts of acacia.

On the 27th we started west, and, marching along a khor, camped about 15 miles from Fashoda at an Arab village.

In the evening I saw some elephants feeding in a swamp, and next day went to get a nearer view of them, but, after much wading and swimming of khors, found that they had left the district. I saw two herds of giraffes, which were very tame and inquisitive, coming within two hundred yards to inspect us while we were sitting under the shade of a tree, and keeping parallel with us for some way when we moved on. The mosquitos in the khor were in clouds, and directly

after sundown we had either to sit in the smoke of the fire or retire under our mosquito-nets. My men got terribly bitten, as they had neglected to bring nets with them. Birds were scarce, and I saw only those of the same species as I had observed near the river. On returning to Fashoda, we found that four of our men and two of the crew had been locked up by the sergeant, as they had created a disturbance and done a bit of fighting while celebrating the feast of Bairan. I met Mr. Loat and Mr. Gunn, F.R.C.S., at Fashoda. The former was collecting fishes for the Egyptian Government, and had been as far south as Lake No. He had been very successful, but was handicapped by being unable to procure a sufficient supply of spirit, as the railway authorities were unwilling to take the risk of carrying it. Rain began to fall at Fashoda, and the men who had been with us inland were attacked by malaria, due most likely to the mosquito-bites, so we started on our return journey on April 3rd. On the 5th we camped about 30 miles north of Fashoda, and stopped there for ten days to collect. We got several buffalos, and shot a good many lions in that district. On the 15th we sailed north and stopped south of Kaka to collect till May 7th, but as all our men and most of the crew were suffering from fever we determined to return to Omdurman. The south wind was blowing regularly now, so we made good way and collected as we went. The swarms of Ducks and most of the Waders had disappeared, and only Geese and the regular summer residents remained. We arrived at Omdurman on May 26th and found it nearly deserted, as the officials had all moved over to their new quarters in Khartum.

The results of the expedition were satisfactory so far as the specimens of the larger mammals went, for we obtained the skins of buffalo, roan antelope, waterbuck, white-eared kob, tiang, gazelle, oribi, and reedbuck, besides killing eight lions and a leopard. We got only a few specimens of the smaller mammals. In birds I was disappointed, as I expected to get many more species; Doves and Weaver-birds swarmed, but other small kinds, especially Larks, were scarce. On

the whole the climate was good, the heat not being intense until we returned to Khartum. The travelling was easy, but the servants and men, with a few exceptions, were the worst that I have ever employed. From the officials we met with every help and kindness. I have particularly to thank Major Mathews and Captains Parker and Mosant, of the Intelligence Department, and Dr. Keatinge, of the Cairo Medical School. I have also to offer my best thanks to Mr. Ogilvie-Grant, who has kindly arranged and determined the birds that we procured, and who provided me beforehand with all the available information about the country.

II. *List of the Birds procured, by W. R. OGILVIE-GRANT; with Field-notes by R. M^cD. HAWKER.*

Although Mr. Hawker was disappointed with the results of this expedition as regards Birds, it will be seen that a very fine collection was brought home, and that many of the specimens are of very great interest and have led to important discoveries. As instances we may mention the Finch-Larks (*Pyrrhulauda*), the Chats (*Saxicola*), the Green-backed Warblers (*Camaroptera*), the Wood-Hoopoes (*Irrisor*), the Barbets (*Melanobucco*), and the Wood-Ibis (*Pseudotantalus*).

Species marked with an asterisk (*) were identified by Mr. Hawker, but are not represented in the collection.

To save repetition, the titles of several of the works quoted in this paper have been abbreviated as follows:—

Mr. Witherby's article (*Ibis*, 1901, pp. 237–278) is quoted as "Witherby" or "W."

Messrs. Grant and Reid's article (*Ibis*, 1901, pp. 607–699, pl. xiii.) is quoted as "Grant & Reid."

Messrs. N. C. Rothschild and Wollaston's article (*Ibis*, 1902, pp. 1–33, pl. i.) is quoted as "N. C. Roths. & Wollast." or "R. & W."

The following fifty-five species have been recorded by Mr. H. F. Witherby and by Messrs. N. C. Rothschild and Wollaston as occurring on the Lower White Nile between Abba Island and Khartum, but their names are not included

in Mr. Hawker's collection, which was chiefly made on the Upper White Nile, between Abba Island and Fashoda :—

| | |
|------------------------------------|--|
| Rhinocorax affinis. R. & W. | Acrocephalus streperus. W. |
| Spreo pulcher. W., R. & W. | Burnesia gracilis. R. & W. |
| Oriolus galbula. W. | Cisticola cisticola. R. & W. |
| Vidua principalis. R. & W. | " aridula. W., R. & W. |
| Lagonosticta brunneiceps. R. & W. | Monticola saxatilis. W. |
| Pytelia citerior. W. | " cyanus. R. & W. |
| Hypochera ultramarina. R. & W. | Saxicola amophileuca. W. |
| Hyphantornis galbula. W. | Argya acaciæ. W., R. & W. |
| " vitellinus. R. & W. | Cotile minor. R. & W. |
| Petronia pyrgita. R. & W. | " rupestris. W. |
| Passer rufidorsalis. W., R. & W. | Hirundo smithi. R. & W. |
| Emberiza flavigastra. W. | Trachyphonus margaritatus. W., R. & W. |
| Calandrella brachydactyla. R. & W. | Caprimulgus eximius. W., R. & W. |
| Ammomanes cinctura. R. & W. | " " W. |
| " deserti. R. & W. | Merops apiaster. W. |
| Pyrrhulauda melanauchen. W. | Lophoceros nasutus. W., R. & W. |
| " frontalis. R. & W. | Bubo desertorum. R. & W. |
| Motacilla alba. R. & W. | Circus pygargus. R. & W. |
| " vidua. R. & W. | " macrurus. W., R. & W. |
| Anthus campestris. R. & W. | Falco tanypterus. W. |
| Lanius dealbatus. W., R. & W. | Gyps fulvus. R. & W. |
| " assimilis. R. & W. | Vultur monachus. R. & W. |
| Sylvia nisoria. W. | Garzetta garzetta. W. |
| " rueppelli. R. & W. | Eupodotis arabs. W., R. & W. |
| " mystacea. R. & W. | Cursorius gallicus. W. |
| " galactodes. W., R. & W. | Tringa alpina. W. |
| Phylloscopus trochilus. W. | Hydrochelidon hybrida. W. |
| Acrocephalus palustris. W. | Pteroclorus senegallus. W., R. & W. |
| | " " W. |

A number of the eggs collected by Mr. Hawker have been described by Mr. Oates in the Appendix to the second volume of the 'Catalogue of Birds' Eggs in the British Museum,' which is duly quoted in the present paper. The remainder will appear in the subsequent volumes of that work.

1. HETEROCORAX CAPENSIS.

Heterocorax capensis Licht.; Grant & Reid, p. 610.

a. ♀. Kaka, 28th Feb. No. 85.

b. ♂. Kaka, 8th March. No. 120.

c. ♂. 20 miles N. of Fashoda. No. 344 †.

d, e. ♂ ♀. Kaka, 4th May. Nos. 432, 433 †.

f. ♂. Kaka, 4th May. No. 434.

Iris dark hazel; bill, legs, and feet black.

[I only met with the African Rook in a small district extending from the south and west of Kaka to Fashoda. It was generally found near the villages, and had a very harsh cry. When sitting on a tree it puffs out the feathers on its head and neck, which gives it the appearance of having a very large head. Its nest is generally placed on the end of a very thin bough; it is beautifully made of smallish thorn-branches with an outer lining of fibre and an inner lining of the felted hair of animals. The eggs, three in number, are rosy white, freckled and blotched with maroon and dark cinnamon.—R. M. H.]

2. CORVUS SCAPULATUS.

Corvus scapulatus Daud.; Witherby, p. 249; Grant & Reid, p. 610; N. C. Roths. & Wollast. p. 13.

a. ♂. Jebel Ain, 11th Feb. No. 48.

b. ♂. Kaka, 4th May. No. 431 ‡.

Iris hazel; bill, legs, and feet black.

[The White-bellied Crow is the commonest member of the Corvidæ on the White Nile. It is very plentiful south of Jebel Ain. I took several nests. They are placed at the end of very thin boughs, and are therefore rather difficult to get at. I shot one bird off a nest, and three days afterwards I saw that its mate was sitting. Eggs were procured at about 20 miles north of Fashoda.—R. M. H.]

3. *CORVUS UMBRINUS.

Corvus umbrinus Sundev.; Grant, Nov. Zool. vii. p. 245 (1900); Witherby, p. 250; N. C. Roths. & Wollast. p. 13.

[I only observed one pair of this Raven on the White Nile, and these were seen on Abba Island.—R. M. H.]

† Breeding.

‡ Breeding; three eggs taken.

4. LAMPROTORNIS PORPHYROPTERUS. = *purpureus*

Lamprotornis porphyropterus Rüpp. ; Sharpe, Cat. B. Brit. Mus. xiii. p. 156 (1890) [part.] ; Grant, Ibis, 1900, p. 121.

Lamprotornis brevicaudus Sharpe, Bull. B. O. C. vi. p. xlvi (1897) ; id. Ibis, 1891, p. 591.

a. ♀. Fashoda, 26th March. No. 189.

b-e. ♂ ♀. 20 miles N. of Fashoda, 6th-11th April. Nos. 298 †, 301, 302, 312 †.

Iris pale straw-coloured ; bill and legs black.

In the 'Catalogue of Birds' (xiii. p. 156) two rather well-marked forms are united under the title *L. porphyropterus* Rüpp :—

- (A) A smaller shorter-tailed species is found in Southern Abyssinia, Somaliland, Uganda, the Equatorial Province, and at Fashoda. This bird is the true *L. porphyropterus* Rüpp., the type of which was procured in Shoa. There are two cotypes in the British Museum received from Rüppell in 1845, but these are omitted from the list of specimens given in the 'Catalogue of Birds' (xiii. p. 156). Only specimens *h, i, k, l* belong to the true *L. porphyropterus*.
- (B) A larger longer-tailed species inhabits the highlands of Bogosland, and ranges south-westwards to the lower valley of the White Nile and Kordofan. This bird should bear the name *L. æneocephalus* Heugl. (*cf.* J. f. O. 1863, p. 22). Specimens *a* to *g* in the above-mentioned list belong to this form.

Dr. Sharpe (*cf.* Bull. B. O. C. vi. p. xlvi, recognised the fact that he had united two distinct forms under the heading *L. porphyropterus*, and proposed to separate the shorter-tailed southern species under the name *L. brevicaudus* ; but, as shown above, this name is synonymous with typical *L. porphyropterus* Rüpp., and the longer-tailed form already bears Heuglin's name, *L. æneocephalus*. The latter was the species obtained by Mr. Witherby at Ed-Duem, on the White Nile.

† Breeding.

The measurements of the two species are as follows :—

| <i>L. porphyropterus</i> Rüpp. [= <i>L. brevicaudus</i> Sharpe.] | | <i>L. æneocephalus</i> Heugl. [= <i>L. porphyropterus</i> Witherby (nec Rüpp.), Ibis, 1901, p. 249.] | |
|---|----------|--|--------------------------------------|
| Males. | Females. | Males. | Females. |
| Tail. | Tail. | Tail. | Tail. |
| in. | in. | in. | in. |
| Fashoda | 6·1 | 5·3 | |
| „ | 6·0 | 4·7 | Anseba Valley .. 8·35 |
| „ | 5·8 | | „ .. 7·9 |
| S. Abyssinia .. | 6·1 | | „ .. 7·8 |
| Shoa (<i>Riippell</i>). [Cotype of <i>L.</i> <i>porphyropterus</i> .] | 5·75 | | Ed-Duem, White Nile 8·0 |
| Somaliland | 5·9 | 4·9 | „ 6·87 |
| Lake Baringo .. | 5·75 | | „ 6·75 |
| Elgeyu | 5·6 | | |
| [Type of <i>L. brevi-</i> <i>caudus</i> .] | | | |
| Lado † | 5·9 | | |

[This Purple-winged Glossy Starling was very common on Abba Island, and I saw it here and there further south.—R. M. H.]

5. *BUPHAGA ERYTHORHYNCHA.

Buphaga erythrorhyncha (Stanl.) ; Grant & Reid, p. 612.

[Only one small flock of the Red-billed Ox-pecker was seen, feeding on some buffalos near Kaka.—R. M. H.]

6. BUCHANGA ASSIMILIS.

Buchanga assimilis (Bechst.) ; Grant & Reid, p. 613.

Buchanga afra Witherby, p. 250.

a. ♂. Kaka, 15th March. No. 137.

b. ♂. Fashoda, 30th March. No. 252.

c, d. ♂ imm. 20 miles N. of Fashoda, 6th April. Nos. 294, 295.

e. ♂. 20 miles N. of Fashoda, 8th April. No. 307.

f. ♂. 20 miles N. of Fashoda, 13th April. No. 341.

g. ♀ §. 20 miles N. of Fashoda, 15th April. No. 362.

Iris crimson ; bill, legs, and feet black.

† Sexed female.

‡ Probably a male.

§ Breeding ; nest and eggs taken.

[The African Drongo is very common south of Kaka, but rare further north. Its song is very cheerful. It begins to sing just before daylight and does not cease till after sunset.

I took three nests with eggs in April. Two of them contained three eggs each, but those in the several nests were of a different colour. One clutch was pale terra-cotta, clouded with darker terra-cotta on the large end; another clutch was white, spotted with small purplish-brown spots.—R. M. H.]

7. STEGANURA PARADISEA.

Steganura paradisea (Linn.); Grant, Ibis, 1900, p. 123.

a. ♂ imm. (?). Kaka, 29th April. No. 409.

b, c. ♂ ♀ imm. (?). Ed-Duem, 23rd May. Nos. 563, 564.
Iris hazel; bill and legs horn-coloured.

This species appears to breed throughout the year in the various parts of its wide range, for the British Museum Collection contains male birds in full breeding-dress shot in every month of the year except January and October, as will be seen from the following list:—

Rustenburg, Transvaal: 25th November.

Tati, Limpopo River: 30th April.

Nyasaland: February, May, June, July, August, September.

Somaliland: 2nd December.

Abyssinia: March, May.

Loando: July.

The males shot by Mr. Hawker, which are apparently immature birds, are in the garb of the female. All three specimens are in full moult, and the new flight-feathers as well as the middle tail-feathers have been renewed; the latter are not, however, longer than the outer pairs.

[The Paradise Whydah-Finch was not common. I never saw any with the long tail-feathers.—R. M. H.]

8. UROBRACHYA PHŒNICEA.

Urobrachya phœnicea (Heugl.); Sharpe, Cat. B. Brit. Mus. xiii. p. 225 (1890).

a. ♂. Fashoda, 22nd March. No. 165.

b. ♂. 20 miles N. of Fashoda, 12th April. No. 335.

c-g. ♂ ♀. Kaka, 2nd May. Nos. 420-424.

Iris hazel; bill horn-coloured; legs dusky.

All the specimens are adults in non-breeding plumage, and from the scarlet-orange colour of the shoulder-patch there appears to be little doubt that they belong to this species and not to *U. traversi* Salvad., which has the shoulder-patches yellowish orange.

[I never met with the Fire-shouldered Weaver-Finch north of Kaka. It went in flocks and fed on the recently-burnt ground near the river and the swamps.—R. M. H.]

9. PYROMELANA FRANCISCANA.

Pyromelana franciscana (Isert); Witherby, p. 247; Grant & Reid, p. 614; N. C. Roths. & Wollast. p. 11.

a. ♀. Fashoda, 1st April. No. 278.

Iris dark hazel; upper mandible dusky, lower pale horn-coloured; legs and feet dusky.

[The Orange Weaver-Finch was generally met with in flocks with other Weaver-birds.—R. M. H.]

10. PYROMELANA LADOENSIS.

Pyromelana ladoensis (Reichenow); Sharpe, Cat. B. Brit. Mus. xiii. p. 224 (1890).

a-d. ♂ ♀. Fashoda, 25th March to 1st April. Nos. 182, 184, 277, 279.

e. ♀. 20 miles N. of Fashoda, 13th April. No. 338.

Iris hazel; bill dusky, paler on lower mandible; legs and feet dusky. The males are still in winter plumage, shewing no trace of the yellow and black breeding-dress.

[The Lado Weaver-Finch was fairly common and was met with in flocks of *P. franciscana* and other allied species.—R. M. H.]

11. QUELEA ÆTHIOPICA.

Quelea æthiopica (Gray); Grant & Reid, p. 616.

a-c. ♀. Fashoda, 25th and 26th March. Nos. 180, 204, 210.

d, e. ♂ ♀. 20 miles N. of Fashoda, 13th April. Nos. 336, 337.

Iris hazel; bill pink; legs and feet horn-coloured. All five specimens are in winter plumage.

[The Ethiopian Red-billed Weaver-Finch is very common south of Kaka and goes in flocks along with *Hyphantornis taniopterus*.—R. M. H.]

12. LAGONOSTICTA BRUNNEICEPS.

Lagonosticta brunneiceps Sharpe; Grant, Ibis, 1901, p. 617.

a. ♀. Goz-Abu-Gumar, 16th May. No. 477.

b, c. ♂ imm. et ♀. Ed-Duem, 22nd May. Nos. 539, 540.

Iris crimson; bill crimson, ridge of culmen and suture of lower mandible black; legs flesh-coloured.

[The Brown-capped Fire-Finch was not common; I never noticed it south of Goz-Abu-Gumar.—R. M. H.]

13. PYTELIA SOUDANENSIS.

Zonogastris soudanensis Sharpe; Sharpe, Cat. B. Brit. Mus. xiii. p. 298 (1890).

a. ♀. Ed-Duem, 22nd May. No. 541.

Iris light reddish brown; bill flesh-coloured, darker at tip; legs and feet flesh-coloured.

It is difficult to be certain that this identification is correct. Both *Pytelia soudanensis* (Sharpe) and the allied *P. citorior* Strickl. occur in the White Nile Valley, and the females are apparently almost identical in appearance: possibly that of *P. citorior* has the sides and flanks more heavily barred.

[The Red-faced Finch was only met with on a few occasions in the neighbourhood of Ed-Duem.—R. M. H.]

14. SPORÆGINTHUS SUBFLAVUS.

Sporæginthus subflavus (Vieill.); Grant, Ibis, 1900, p. 130.

a. ♀. 20 miles N. of Fashoda, 19th Mar. No. 146.

b, c. ♂ ♀. Fashoda, 26th Mar. Nos. 206, 207.

d-g. ♂ ♀ ad. et imm. Fashoda, 28th Mar. Nos. 215-227.

r. ? 20 miles N. of Fashoda, 13th April. No. 340.

s-u. ♂ imm. et ? ♀. Kaka, 6th May. Nos. 439-441.

Iris crimson; sides of bill crimson, black along the culmen; legs flesh-coloured.

[The Sanguineous Waxbill occurs in small flocks; I never noticed it north of Kaka.—R. M. H.]

15. *ÆDEMOSYNE CANTANS.*

Ædemosyne cantans (Gmel.); Witherby, p. 247; Grant & Reid, p. 618; N. C. Roths. & Wollast. p. 11.

a. Ad. Kaka, 28th February. No. 90.

Iris brown; bill lead-blue; legs horn-coloured.

[The African Silver-bill is common. I found a nest with young birds in it in March.—R. M. H.]

16. *ESTRILDA CINEREA.*

Estrilda cinerea (Vieill.); Sharpe, Cat. B. Brit. Mus. xiii. p. 394 (1890).

a. ♂. Fashoda, 29th March. No. 228.

b-d. ♂ ♀. Fashoda, 2nd April. Nos. 280-282.

Iris and bill crimson; legs dusky.

[The Grey Amaduvade is not very common.—R. M. H.]

17. *ESTRILDA PHÆNICOTIS.*

Estrilda phœnicotis Swains.; Witherby, p. 248; Grant & Reid, p. 619.

a. ♂. Jebel Ahmed-Agha, 19th February. No. 61.

b. ?. Kaka, 28th February. No. 86.

c. ♀. 20 miles N. of Fashoda, 12th April. No. 327.

Iris hazel; bill pink, dusky at tip; legs horn-coloured.

[The Crimson-eared Waxbill or Cordon Bleu is very common and is one of the few tame Sudan Finches.—R. M. H.]

18. *SITAGRA LUTEOLA.*

Sitagra luteola (Licht.); Sharpe, Cat. B. Brit. Mus. xiii. p. 425 (1890); Witherby, p. 248.

a. ♀ imm. Fashoda, 29th March. No. 240.

b. ♂ imm. Kaka, 23rd April. No. 397.

c. ♂. Goz-Abu-Gumar, 18th May. No. 512.

Iris hazel; bill dusky, under mandible lighter.

The adult male, specimen *c*, of the Black-capped Weaver-Finch is out of plumage and is in the dress of an adult female.

19. *HYPHANTORNIS TÆNIOPTERUS.*

Hyphantornis tæniopterus Reichenb.; Sharpe, Cat. B. Brit. Mus. xiii. p. 467 (1890).

a. ♂. Jebel Ahmed-Agha, 19th Feb. No. 60.

b-d. ♂. Kaka, 26th to 28th Feb. Nos. 76, 76 a, 77.

e, f. ♂ ♀. Kaka, 5th & 15th Mar. Nos. 112, 134.

g-n. ♂ ♀ et ♂ imm. Fashoda, 26th Mar. to 2nd April.
Nos. 186, 211-213, 229, 243, 291.

o. ♂. 20 miles N. of Fashoda, 6th April. No. 299.

Iris pale straw-coloured granulated with black; upper mandible dusky, lower white, dusky along upper edges; legs and feet pinkish horn-coloured.

All the specimens of Reichenbach's Weaver-Finch collected by Mr. Hawker are out of plumage. His birds were obtained between the 19th of February and the 6th of April and none shew any trace of assuming the breeding-plumage. The immature males apparently differ in having the buff on the under parts of a more decided tint than the adults and the wing varies from 2.55-2.6 inches, whereas in the adult male it measures 2.75-2.8. The female has the wing 2.5.

In a small collection made by Capt. H. N. Dunn in the month of May at the mouth of the Zeraf River there are four males in various interesting stages of transitional plumage—the most backward shewing only a few feathers of the breeding-plumage, while in the most advanced it is almost complete. A male procured by Emin Pasha at Lado on the 6th of May, and very similar to the last named, is in almost full breeding-dress, but still retains one or two feathers of the undress plumage; a second male obtained by him at Bor on the 10th of July is in full plumage.

It is thus clear that the breeding-plumage is *annually* assumed in the month of May.

[Reichenbach's Weaver-Finch goes about in enormous flocks, which appear to be kept continually on the move by Hawks, and prove a great nuisance to the naturalist. Nearly every bush seems to be full of them, and when they fly off they generally frighten every other species of small bird that happens to be near, thus making collecting very difficult.

I never saw any individuals in breeding-plumage, though I must have seen many millions.—R. M. H.]

20. *PASSER DIFFUSUS*.

Passer diffusus (Smith); Sharpe, Cat. B. Brit. Mus. xii. p. 336 (1888); Witherby, p. 246.

a. ♀. 20 miles N. of Fashoda, 11th April. No. 322.

Iris brown; bill dusky, paler on under mandible; legs and feet dusky.

This southern form, characterized by the white spot on the throat, has also been obtained in Somaliland.

[I only saw a few examples of the Southern Grey-headed Sparrow.—R. M. H.]

21. *PASSER LUTEUS*.

Passer luteus (Licht.); Sharpe, Cat. B. Brit. Mus. xii. p. 340 (1888); Witherby, p. 247; N. C. Roths. & Wollast. p. 10.

a-h. ♂ ♀ et ♂ imm. Ed-Duem, 22nd to 23rd May. Nos. 546-551 & 560, 561.

Iris light brown; bill, legs, and feet horn-coloured.

The series includes several immature males in various stages of plumage: some with the throat, chest, and eyebrow-stripe yellow, the rest of the under parts whitish, and the forehead and crown pale brown; others in plumage similar to that of the female.

[The Yellow-breasted Sparrow was common about Ed-Duem, and was generally seen in small flocks.—R. M. H.]

22. *SERINUS LEUCOPYGIUS*.

Serinus leucopygius (Sundev.); Sharpe, Cat. B. Brit. Mus. xii. p. 366 (1888); Witherby, p. 247.

a, b. ♀. Fashoda, 26th & 30th Mar. Nos. 187 & 250.

Iris hazel; bill dusky; legs horn-coloured.

The female scarcely differs from the male in plumage, the breast is perhaps slightly more spotted.

[The White-rumped Serin-Finch is not very common. It generally goes in small flocks, and its white rump makes it conspicuous among the other Finches.—R. M. H.]

23. *EMBERIZA CÆSIA*.

Emberiza cæsia Cretzschm.; Sharpe, Cat. B. Brit. Mus. xii. p. 35 (1888); N. C. Roths. & Wollast. p. 9.

a-c. ♂ ♀. Khartum, 25th Jan. Nos. 19-21.

Iris hazel ; bill horn-coloured ; legs and feet fleshy horn-coloured.

[I only saw Cretzschmar's Bunting near Khartum.—R. M. H.]

24. MELANOCORYPHA BIMACULATA.

Melanocorypha bimaculata (Ménétr.) ; Sharpe, Cat. B. Brit. Mus. xiii. p. 555 (1890).

a-c. ♂ ♀. Wad Shalai, 5th Feb. Nos. 42-44.

Iris hazel ; bill horn-coloured, dark above and at tip of lower mandible ; legs and feet fleshy horn-coloured.

[I only saw one flock of Double-spotted Calandra Larks ; they were on their way to water.—R. M. H.]

25. MIRAFRA ERYTHROPYGIA.

Mirafra erythropygia (Strickl.) ; Sharpe, Cat. B. Brit. Mus. xiii. p. 619 (1890) ; Alexander, Ibis, 1902, p. 292.

a. ♂. Renk, 10th May. No. 462.

Iris hazel ; bill dusky, paler at base below ; legs and feet pale horn-coloured.

This very rare Lark is only represented in the British Museum Collection by two specimens, one of which has been recently forwarded from the Zeraf by Capt. H. Dunn. The specimen before us is in worn plumage and is just commencing to moult its flight-feathers, the innermost primary and outermost secondary quills being partially grown on either side. Capt. Boyd Alexander was fortunate in procuring a number of these Larks in the Gold Coast Colony.

[I only saw one scattered flock of Rufous-rumped Bush-Larks. They were very wild and perched on the tops of trees and bushes, so that I had great difficulty in procuring a specimen.—R. M. H.]

26. MIRAFRA ALBICAUDA.

Mirafra albicauda Reichenow, J. f. O. 1891, p. 223 ; id. Vög. Deutsch-Ost-Afr. p. 203 (1894).

a-g. ♂ ♀. 20 miles N. of Fashoda, 12th April. Nos. 328-334 †.

h. ♀. Kaka, 2nd May. No. 425.

Iris hazel ; bill dusky, pale below ; legs horn-coloured.

† Nos. 328, 331, 332 are said to have been breeding birds.

The examples in the fine series of this Lark obtained by Mr. Hawker appear to agree with Dr. Reichenow's description, and the species is certainly identical with the birds obtained by Lord Delamere in British East Africa and identified by Dr. Sharpe as *M. albicauda*. It is new to the British Museum Collection. We may mention that the amount of white in the outer tail-feathers varies: in some examples, as in the type, the *two* outer pairs are mostly white, and the fourth pair have the outer web margined with white; in others only the outer pair of feathers are white and the fifth pair have the outer web mostly white, while in the fourth it is only margined with white.

[We only noticed the White-tailed Bush-Lark between Fashoda and Kaka.—R. M. H.]

27. GALERIDA CRISTATA.

Galerida cristata (Linn.); Grant & Reid, p. 629; N. C. Roths. & Wollast. p. 6.

Galerida flava Brehm; Witherby, p. 244.

a, b. ♂. Khartum, 23rd–25th Jan. Nos. 1 & 7.

Iris hazel; bill horn-coloured; legs and feet whitish flesh-coloured.

The skins before us belong to the pale form known as *G. flava*.

[Common around Khartum.—R. M. H.]

28. PYRRHULAUDA LEUCOTIS.

Pyrrhulauda leucotis (Stanl.); Witherby, p. 245; Grant & Reid, p. 629; Grant, Bull. B. O. C. xii. no. lxxxii. p. 14 (1901).

a, b. ♂ et ♀ [♂ imm.]. 20 miles N. of Fashoda, 19th March. Nos. 148 & 149.

c. ♂ imm. 20 miles N. of Fashoda, 12th April. No. 326.

Iris dark brown; bill and legs pale horn-coloured.

This form is scarcely separable from *P. smithi*, of South-Africa, which has the bill slightly larger, but is in other respects similar.

[I saw a great many examples of the Black-shouldered Finch-Lark. They generally came to the river to drink

between 8 and 12 o'clock in the forenoon in small scattered flocks or families.—R. M. H.]

29. PYRRHULAUDA MELANOCEPHALA.

Alauda melanocephala Licht. Verz. Doubl. p. 28 (1823).

Fringilla otoleucus Temm. Pl. Col. iii. pl. 269. figs. 2, 3 (1824).

Pyrrhulauda melanocephala Grant, Bull. B. O. C. xii. no. lxxxii. p. 14 (1901); N. C. Roths. & Wollast. p. 8.

a-c. ♂ et ♂ imm. Khartum, 25th Jan. Nos. 16-18.

Iris dark brown; bill, legs, and feet pale horn-coloured.

One of the most interesting points established by the present expedition was the existence of two closely allied, but perfectly distinct, species—*Pyrrhulauda leucotis* (Stanl.) and *P. melanocephala* (Licht.)—in the valley of the White Nile. Owing to want of material these two forms had been united in the 'Catalogue of Birds' (*cf.* vol. xiii. p. 637).

The differences between the males of the two species may be tabulated as follows:—

| <i>P. leucotis.</i> | <i>P. melanocephala.</i> |
|---|--|
| Bill dusky. | Bill white. |
| White band across nape narrow, 0·1 inch. | White band across nape wide, 0·25 inch. |
| Chestnut of upper parts dark. | Chestnut of upper parts paler. |
| Lesser wing-coverts black. | Lesser wing-coverts white. |

Through the kindness of Dr. Reichenow I have ascertained that the type of *Alauda melanocephala* Licht. is identical with *Fringilla otoleucus* Temm.

This species appears to be the western representative, extending to Senegal; the true *P. leucotis* being confined to the countries east of the White Nile, where the ranges of the two species overlap.

[The White-shouldered Finch-Lark is fairly common near Khartum. It generally frequents the paths and feeds on the grain which falls from loads. When disturbed it flies a short way and then crouches close to the ground.—R. M. H.]

30. MOTACILLA FLAVA.

Motacilla flava Linn.; Witherby, p. 244; Grant & Reid, p. 631; N. C. Roths. & Wollast. p. 5.

a. ♂. 20 miles N. of Fashoda, 19th Mar. No. 141.

b. ♂. Fashoda, 26th Mar. No. 208.

Iris hazel; bill and legs black.

[The Blue-headed Yellow Wagtail was fairly common along the White Nile at Fashoda.—R. M. H.]

31. MOTACILLA CAMPESTRIS.

Motacilla campestris Pall.; Grant, Ibis, 1900, p. 140.

a. ♀ imm. Khartum, 25th Jan. No. 12.

Iris brown; bill and legs black.

An immature example of Ray's Wagtail.

32. MOTACILLA FELDEGGI.

Motacilla feldeggi Michah.; Grant & Reid, p. 631.

a. ♂. Khartum, 25th Jan. No. 13.

b, c, d. ♂. Fashoda, 26th & 30th Mar. Nos. 201 & 202, 246.

Iris hazel; bill, legs, and feet dusky.

[We found the Black-headed Wagtail fairly common near Fashoda in company with *M. flava*.—R. M. H.]

33. ANTHUS RICHARDI.

Anthus richardi Vieill.; Sharpe, Cat. B. Brit. Mus. x. p. 564 (1885).

a, b. ♀. Goz-Abu-Gumar, 18th May. Nos. 508, 509.

Iris hazel; bill dusky, paler below; legs flesh-coloured.

The occurrence of Richard's Pipit in the Sudan is interesting, though it was to be expected that it would be found there sooner or later, as it had already been recorded by Loche from Algeria, by Zander (J. f. O. 1853, Bericht, p. 61) from N. Africa, and by Brehm (J. f. O. 1855, p. 366) from E. Africa.

[I found this Pipit feeding on the bean-fields near Goz-Abu-Gumar.—R. M. H.]

34. ANTHUS CERVINUS.

Anthus cervinus (Pall.); Witherby, p. 244; Grant & Reid, p. 633; N. C. Roths. & Wollast. p. 6.

a. ♂. Khartum, 25th Jan. No. 11.

b. ♂. Fashoda, 1st April. No. 276.

a (in winter plumage). Iris hazel; upper mandible

dark horn-coloured, lower lighter at base; legs light horn-coloured.

b (in summer plumage). Iris brown; bill and legs horn-coloured.

[I only noticed one Red-throated Pipit south of Khartum.—R. M. H.]

35. NECTARINIA PULCHELLA.

Nectarinia pulchella (Linn.); Witherby, p. 243; Grant & Reid, p. 634.

a. ? ♀. Kaka, 17th April. No. 378.

b-l. ♂ ♀ et imm. Renk, 9th May. Nos. 449-458.

m, n. ♂. Goz-Abu-Gumar, 17th May. Nos. 497 & 499.

♂. Iris hazel; bill and legs black.

♀. Iris hazel; bill dusky, lighter towards base.

The series collected shews the male in every stage of plumage, from quite young to fully adult.

[I found the males of the Beautiful Sunbird in flocks where the Mimosa was flowering. The females were rather rare. I never noticed the species north of Goz-Abu-Gumar.—R. M. H.]

36. NECTARINIA METALLICA.

Nectarinia metallica Licht.; Witherby, p. 242; Grant & Reid, p. 634; N. C. Roths. & Wollast. p. 4.

a-c. ♂ ad. et imm. Jebel Auli, 4th Feb. Nos. 37-39.

d. ♀. Goz-Abu-Gumar, 17th May. No. 490.

♂. Iris light brown; bill and legs black.

♀. Iris hazel; bill black, light at base of lower mandible; legs and feet black.

[I never saw the Blue-collared Long-tailed Sunbird south of Jebel Auli.—R. M. H.]

37. ÆGITHALUS PUNCTIFRONS.

Ægithalus punctifrons Sundev. Cefvers. Vet.-Akad. 1850, p. 129; Witherby, p. 243; N. C. Roths. & Wollast. p. 5.

a. ♂. Jebel Ahmed-Agha, 19th Feb. No. 63.

b. ♀. Goz-Abu-Gumar, 17th May. No. 491.

Iris light hazel; bill dusky; legs and feet bluish ash.

[We did not find the Nubian Penduline Titmouse common. It seems to have the habits of an *Acanthiza*.—R. M. H.]

38. *TELOPHONUS REMIGIALIS*.

Telephonus remigialis Finsch & Hartl.; Gadow, Cat. B. Brit. Mus. viii. p. 128 (1883); Witherby, p. 252; N. C. Roths. & Wollast. p. 14.

a-d. ♂. Kaka, 28th Feb.-5th Mar. Nos. 73, 94, 95, 107.

e. ♀. Fashoda, 1st April. No. 271.

f. ? 20 miles N. of Fashoda, 8th April. No. 310.

g, h. ♀. Kaka, 29th April, 6th May. Nos. 411, 438.

Iris bluish grey; bill dark horn-coloured, whitish at base of the lower mandible, or entirely black; legs ashen green.

[Hartlaub's Red-winged Bush-Shrike is fairly common between Kaka and Fashoda, and is generally to be found in pairs. It frequents low scrub and is rather shy.—R. M. H.]

39. *LANIARIUS ERYTHROGASTER*.

Laniarius erythrogaster (Cretzschm.); Grant, Ibis, 1900, p. 148; Witherby, p. 252.

a, b. ♀. Kaka, 23rd-28th Feb. Nos. 65 & 84.

c-e. ♂ et ♂ imm. 20 miles N. of Fashoda, 8th-15th April. Nos. 306, 317, 360.

f. ♀ imm. Goz-Abu-Gumar, 16th May. No. 475.

Iris pale straw-coloured; bill and legs black.

Immature birds have the greater wing-coverts spotted with buff at the tip, the black feathers of the crown mixed with cinnamon, and those of the under parts indistinctly barred with pale buff.

[This Scarlet-bellied Bush-Shrike is common. The male has a peculiar whistle, the last note of which is blended with the hoarse cry of the female. Its demeanour reminded me of *Colluriocinclla harmonica* of Australia.—R. M. H.]

40. *NILAUS AFER*.

Nilaus afer (Lath.); Witherby, p. 251; Grant & Reid, p. 641.

a. ♂. Fashoda, 21st March. No. 162.

b, c. ♂. Fashoda, 29th-31st March. Nos. 233, 264.

d, e. ♂. Kaka, 21st-22nd April. Nos. 382, 386.

Iris hazel; bill and legs black.

[The Abyssinian Bush-Shrike is fairly common, and is generally found singly or in pairs. It has a peculiar low whistle, which can be heard at some distance.—R. M. H.]

41. *LANIUS EXCUBITORIUS*.

Lanius excubitorius Des Murs ; Grant & Reid, p. 641.

a. ♂. Kaka, 5th March. No. 108.

b, c. ♂ ♀. Fashoda, 26th March. Nos. 191, 192.

d, e. ♂. 20 miles N. of Fashoda, 8th–11th April. Nos. 304, 311 †.

f, g. ♀. Kaka, 1st and 7th May. Nos. 415 †, 442.

Iris dark hazel ; bill and legs black.

[I met with the Long-tailed Grey-backed Shrike in flocks of from five to seven individuals, but it was not at all common. I also found its nest, containing four eggs, in a bare thorn-bush. The eggs of this species are new to the British Museum Collection.—R. M. H.]

42. *LANIUS ISABELLINUS*.

Lanius isabellinus Hempr. & Ehr. ; Witherby, p. 251 ; Grant & Reid, p. 641 ; N. C. Roths. & Wollast. p. 13.

a. ♀. 20 miles N. of Fashoda, 11th April. No. 323.

Iris hazel ; bill horn-coloured ; legs dusky.

[I saw very few examples of the Isabelline Shrike and was only able to procure one.—R. M. H.]

43. *LANIUS PARADOXUS*.

Lanius paradoxus Brehm, Vogelfang, p. 84 (1855).

Lanius senator Witherby, p. 250.

a-c. ♂ ♀. Fashoda, 30th March–1st April. Nos. 251, 272, 273.

Iris dark hazel ; bill black, bluish at base ; legs dusky.

The three birds collected by Mr. Hawker belong to the form having the basal part of the middle pair of tail-feathers white.

[I only noticed Brehm's Woodchat-Shrike between Fashoda and Kaka.—R. M. H.]

† Breeding.

44. LANIUS NUBICUS.

Lanius nubicus Licht. ; Grant, Ibis, 1900, p. 149 ; Witherby, p. 250 ; N. C. Roths. & Wollast. p. 13.

a, b. ♂. Kaka, 28th Feb. Nos. 80, 81.

c. ♂. 20 miles N. of Fashoda, 8th April. No. 305.

d. ♂†. 20 miles N. of Fashoda, 13th April. No. 342.

e. ♂ imm. Ed-Duem, 23rd May. No. 566.

Iris hazel ; bill bluish black, lighter below ; legs black.

[The Nubian Shrike was not common.—R. M. H.]

45. BRADYORNIS PALLIDUS.

Bradyornis pallidus (Müll.) ; Grant, Ibis, 1900, p. 150.

a. ♀ ad. Kaka, 13th March. No. 132.

b. ♂ ad. 20 miles N. of Fashoda, 19th March. No. 151.

c. ♂ ad.† Kaka, 29th April. No. 410.

Iris hazel ; bill, legs, and feet black.

These birds belong to the smaller race of *B. pallidus* which has been called *B. subalaris* Sharpe.

a. ♀. Wing 3·15 inches ; tail 2·7.

b, c. ♂. Wing 3·3–3·4 inches ; tail 2·8–3·0.

[I did not notice the Pale Robin-Shrike north of Jebel Ahmed-Agha. It carries itself very much like the English Robin.—R. M. H.]

46. PHYLLOSCOPUS RUFUS.

Phylloscopus rufus (Bechst.) ; Witherby, p. 257 ; Grant & Reid, p. 644.

a. ♂. Wad Shalai, 5th Feb. No. 47.

Iris hazel ; bill and legs horn-coloured.

The Chiffchaff was rarely met with. Mr. Witherby, moreover, only came across it once.

47. SYLVIA CURRUCA.

Sylvia curruca (Linn.) ; Witherby, p. 258 ; Grant & Reid, p. 645.

a. ♂. Wad Shalai, 5th Feb. No. 45.

Iris pale brown ; bill and legs black.

[The Lesser Whitethroat was not common.—R. M. H.]

† Breeding.

48. SYLVIA ORPHEA.

Sylvia orphea Temm.; Seebohm, Cat. B. Brit. Mus. v. p. 14 (1881); N. C. Roths. & Wollast. p. 17.

a. ♂. Jebel Auli, 4th Feb. No. 33.

Iris pale brown; bill and legs black.

[I only noticed a single specimen of the Orphean Warbler.—R. M. H.]

49. HYPOLAIS PALLIDA.

Hypolais pallida (Hempr. & Ehr.); Witherby, p. 257; Grant & Reid, p. 647; N. C. Roths. & Wollast. p. 17.

a. ♀. Jebel Auli, 4th Feb. No. 35.

b. ♂. Wad Shalai, 5th Feb. No. 46.

c. ♂. 20 miles N. of Fashoda, 11th April. No. 319.

d. ♂. Kaka, 24th April. No. 400.

Iris brown; bill horn-coloured; legs and feet dusky or olivaceous.

[I shot the Olivaceous Warbler while it was feeding on insects attracted by the Mimosa flowers.—R. M. H.]

50. SYLVIELLA BRACHYURA.

Sylviella brachyura Lafr.; Grant, Ibis, 1900, p. 155; Witherby, p. 255.

a-c. ♂ ♀. Fashoda, 25th–26th March. Nos. 181, 198, 199.

d. ♀. 20 miles N. of Fashoda, 16th April. No. 364.

e. ♂. Kaka, 17th April. No. 377 †.

f, g. ♂. Ed-Duem, 22nd May. Nos. 552, 553.

Iris light brown; bill, legs, and feet horn-coloured.

[The habits of the Cinnamon-throated Bush-Warbler are very much like those of the Nuthatch. It is a fairly common bird.—R. M. H.]

51. EREMOMELA GRISEOFLAVA.

Eremomela griseoflava Sharpe, Cat. B. Brit. Mus. vii. p. 160 (1883); Witherby, p. 254.

a. ♂ †. Jebel Auli, 4th Feb. No. 36.

Iris hazel; bill and legs dusky.

† Breeding.

The Grey-and-Yellow Bush-Warbler, so far as we are aware, has hitherto been met with only in Bogosland.

52. CAMAROPTERA BREVICAUDATA.

Sylvia brevicaudata Cretzschm. in Rüpp. Atl. Vög. p. 53, pl. 35 b (1826).

Camaroptera brevicauda Sharpe, Cat. B. Brit. Mus. vii. p. 168 (1883) [part.]; Witherby, p. 254.

a-c. ♂ ♀. Kaka, 8th-12th March. Nos. 128-130.

d, e. ♀. 20 miles N. of Fashoda, 13th and 16th April. Nos. 339, 363.

Iris light brown or hazel; bill dusky, lighter on lower mandible; legs and feet horn-coloured.

As already pointed out [Ibis, 1901, p. 648], these specimens represent the true *C. brevicaudata* (Cretzschm.), a name which has been misapplied to the species ranging through Somaliland, Abyssinia, and thence to West Africa. The latter species, which should be known as *C. chrysocnemis* (Licht.), has the throat, breast, sides, and flanks grey. In the birds before us from the White Nile, the throat and rest of the under parts are white, tinged with buff on the sides and flanks. Mr. Witherby noticed that the birds which he obtained were very light-coloured on the breast and throat, but attributed the difference to age.

[This Green-backed Bush-Warbler reminds one of a Hedge-Sparrow in its habits. It comes round the camp and climbs about the zariba catching insects. It is very inquisitive and takes great interest in anything going on. It has a feeble song.—R. M. H.]

53. SPILOPTILA CLAMANS.

Spiroptila clamans (Temm.); Sharpe, Cat. B. Brit. Mus. vii. p. 231 (1883); Witherby, p. 255; N. C. Roths. & Wollast. p. 15.

a, b. ♂ † ♀. Khartum, 25th Jan. Nos. 14 & 15.

c. ♂. Ed-Duem. 22nd May. No. 545.

Iris light brown or pale yellow; bill dusky, lower mandible light at base; legs and feet pale horn-coloured.

† Breeding.

[Temminck's Bush-Warbler was not seen south of Ed-Duem. It inhabits low bushes and is very shy. It has a pretty little song, which it delivers from the top boughs. When approached it dives into a bush and when pursued seems to prefer running to flying.—R. M. H.]

54. PHYLLOLAIS PULCHELLA.

Phyllolais pulchella Sharpe, Cat. B. Brit. Mus. vii. p. 149 (1883).

a. ♂. Jebel Ahmed-Agha, 19th Feb. No. 62.

b. ? Kaka, 8th Mar. No. 126.

c. ♂. Fashoda, 29th Mar. No. 232.

d, e. ♂. 20 miles N. of Fashoda, 11th April. Nos. 315 & 316.

f. ♀. Goz-Abu-Gumar, 17th May. No. 492.

Iris light brown; bill and legs horn- or flesh-coloured.

[The Beautiful Bush-Warbler is very common everywhere south of Abba Island. It has a pleasant song.—R. M. H.]

55. PRINIA MURINA.

Prinia murina (Heugl.); Grant & Reid, p. 650.

a. Ad. Kaka, 28th Feb. No. 87.

b-d. ♂ et ad. Kaka, 2nd & 15th March. Nos. 99, 140, 141.

Iris light brown; bill and legs horn-coloured.

[The Tawny-flanked Grass-Warbler is extremely common. It is very tame and inquisitive and always comes round a camp to see what is going on. It has a great variety of call-notes and can sing sweetly.—R. M. H.]

56. CISTICOLA RUFICEPS.

Cisticola ruficeps (Cretzschm.); Sharpe, Cat. B. Brit. Mus. vii. p. 282 (1883).

a-c. ♂. Kaka, 28th Feb.—2nd Mar. Nos. 91–93.

d. ♂. Fashoda, 26th Mar. No. 196.

Iris light brown; bill dusky; legs horn-coloured.

Specimen *b* [♂, 2nd Mar.] has the whole forehead and crown dull chestnut; *a* and *c* [♂, 28th Feb. and 2nd Mar.] have the forehead dull chestnut, the crown and back of the head widely streaked with dusky; *d* [♂, 26th Mar.] has the

forehead and crown dull rusty red strongly streaked with black. This rare species was represented in the British Museum by only a single example from Southern Nubia.

[The Red-capped Fantail-Warbler was fairly common about Fashoda. I found some of these birds quite two miles from the river. They are much less shy than other grass-birds and, when disturbed, fly up into bushes instead of hiding in the herbage.—R. M. H.]

57. *CISTICOLA MARGINALIS*.

Cisticola marginalis (Heugl.); Sharpe, Cat. B. Brit. Mus. vii. p. 258 (1883); Grant & Reid, pp. 652, 653.

a. ♂. Kaka, 8th Mar. No. 125.

b-f. ♂ ♀. Fashoda, 26th–29th Mar. Nos. 197, 205, 209, 238, 239.

Iris light brown; bill dusky; legs horn-coloured.

As already pointed out (*cf.* Ibis, 1901, pp. 652, 653), this species, which appears to be confined to the Valley of the White Nile, may be at once distinguished from *C. erythro-genys* Heugl. by having the upper tail-coverts buff, with rarely a trace of black spots on one or two of the feathers. This species is new to our collection.

[We found Heuglin's Grass-Warbler fairly common along the banks of the White Nile near Fashoda. It is very shy and takes cover in the grass when disturbed.—R. M. H.]

58. *RUTICILLA PHÆNICURA*.

Ruticilla phœnicura (Linn.); Grant, Ibis, 1900, p. 164; Witherby, p. 258.

a. ♂. 20 miles N. of Fashoda, 11th April. No. 318.

Bill, legs, and feet black.

[The Redstart was not common and appeared to be very shy.—R. M. H.]

59. *SAXICOLA MELANOLEUCA*.

Saxicola melanoleuca (Güld.); Seebohm, Cat. B. Brit. Mus. v. p. 385 (1881); Witherby, p. 259; N. C. Roths. & Wollast. p. 18.

a. ♂. Jebel Auli, 4th Feb. No. 32.

Iris hazel; bill and legs black.

A male of the Eastern form of the Black-throated Chat is in nearly full breeding-plumage. Mr. Witherby met with it even further south at Shebesha.

60. *SAXICOLA CENANTHE*.

Saxicola cenanthe (Linn.); Grant & Reid, p. 658; N. C. Roths. & Wollast. p. 18.

a-g. ♂ ♀. Fashoda, 22nd Mar.-2nd April. Nos. 164, 195, 203, 244, 245, 270, 284.

h. ♀. 20 miles N. of Fashoda, 11th April. No. 324.

Iris hazel; bill and legs black.

[The Wheatear was common, but very wild.—R. M. H.]

61. *SAXICOLA ISABELLINA*.

Saxicola isabellina Cretzschm.; Grant & Reid, p. 658; N. C. Roths. & Wollast. p. 18.

a. ♂. Khartum, 25th Jan. No. 9.

Iris dark hazel; bill and legs black.

[The Isabelline Chat appears to be a scarce bird.—R. M. H.]

62. *SAXICOLA DESERTI*.

Saxicola deserti (Temm.); Grant & Reid, p. 658; N. C. Roths. & Wollast. p. 18.

a. ♂. Khartum, 25th Jan. No. 10.

b. ♀. Omdurman, 2nd Feb. No. 24.

Iris dark hazel; bill and legs black.

An adult pair of the Desert Chat in nearly full breeding-plumage.

63. *SAXICOLA HEUGLINI*.

Saxicola heuglini Finsch & Hartl.; Heugl. Orn. N.O.-Afr. i. p. 346 (1874).

Saxicola bottæ Seebohm, Cat. B. Brit. Mus. v. p. 401 [part. spec. *g*] (1881).

a. ♂ †. 20 miles N. of Fashoda. 11th April. No. 325.

b-e. ♂ ♀. Kaka, 1st-6th May. Nos. 417-419, 437.

Iris hazel; bill and legs black.

Seebohm was evidently in error when he united this form with the much larger and more brightly coloured *S. bottæ* Bonap. The present species may at once be dis-

† Breeding.

tinguished by the rufous-buff margins to the greater wing-coverts, the much less extensive white patch on the throat, and the more dusky breast and under parts. At first sight the rufous-margined wing-coverts might be mistaken for immature plumage, but this is not the case.

Specimen *a*, a breeding male shot on the 11th of April, and specimen *c*, a male shot on the 1st of May, have the plumage of the upper parts, wings, and tail uniform dark brown and extremely worn. They are just commencing to moult; a few dark brown rufous-margined wing-coverts and one or two of the secondary quills are partially grown. Specimen *e*, which was shot on the 6th of May, and specimens *b* and *d*, females, shot on the 1st of May, have already assumed a considerable amount of new plumage, the rufous-edged wing-coverts and innermost secondaries being already full-grown; moreover, specimen *b* has already moulted most of its tail, the new feathers having the basal half white and the terminal half black narrowly tipped with white.

Male. Wing 3·4 inches; tail 2·1–2·3; tarsus 1·1–1·2.

Female. Wing 3·25–3 inches; tail 2·05–2·2; tarsus 1·05.

[Heuglin's Chat kept principally on the burnt land. It was not wild like the other species.—R. M. H.]

64. CERCOTRICHAS PODOBE.

Cercotrichas podobe (Müll.); Witherby, p. 256; Grant & Reid, p. 661; N. C. Roths. & Wollast. p. 17.

a. ♂. Jebel Auli, 4th Feb. No. 34.

b. ♂ imm. Renk, 10th May. No. 465.

c. ♂. Goz-Abu-Gumar, 17th May. No. 487.

Iris light hazel; bill, legs, and feet black.

[The Black Bush-Robin was generally seen in pairs. It is a very shy bird, keeping to the low bushes and running far if winged.—R. M. H.]

65. CRATEROPUS LEUCOCEPHALUS.

Crateropus leucocephalus (Cretzschm.); Grant, Ibis, 1900, p. 171; Witherby, p. 253.

a, b. ♂ ♀. Goz-Abu-Gumar, 17th May. Nos. 485 & 486.

c. ♀. Ed-Duem, 22nd May. No. 556.

Iris yellow; bill black; legs and feet dusky.

[The White-headed Babbling-Thrush is found in companies and is a very noisy bird. It was not seen south of Goz-Abu-Gumar.—R. M. H.]

66. *PYCNONOTUS ARSINOE*.

Pycnonotus arsinoe (Hempr. & Ehr.); Witherby, p. 253; Grant & Reid, p. 662; N. C. Roths. & Wollast. p. 15.

a. ♂. 20 miles N. of Fashoda, 11th April. No. 321.

b. ♂. Kaka, 23rd April. No. 395.

c. ♀. Renk, 10th May. No. 464.

Iris pale brown; bill black; legs and feet black.

[The White-vented Bulbul was very common.—R. M. H.]

67. *MUSCICAPA GRISOLA*.

Muscicapa grisola Linn.; Grant & Reid, p. 173.

a, b, ♀. Kaka. 22nd & 30th April. Nos. 385, 413.

Iris hazel; bill black; legs and feet black.

[The Spotted Flycatcher was met with only at Kaka.—R. M. H.]

68. *BATIS ORIENTALIS*.

Batis orientalis (Heugl.); Grant & Reid, p. 662.

a. ♂ imm. Kaka, 28th Feb. No. 82.

b. ♀ †. Kaka, 28th Feb. No. 83.

c, d. ♂ † ♀ †. Fashoda, 21st March. Nos. 160, 161.

e. ♀. Fashoda, 30th March. No. 248.

f-h. ♂ ♀ ad. Fashoda, 2nd April. Nos. 286, 287, 288.

Iris bright yellow; bill, legs, and feet black.

[The Abyssinian White-flanked Flycatcher was fairly common south of Jebel Ahmed-Agha. It was generally met with in pairs.—R. H. M.]

69. *TERPSIPHONE CRISTATA*.

Terpsiphone cristata (Gmel.); Witherby, p. 259; Grant & Reid, p. 663.

a-n. ♂ ♀ et ♂ imm. 20 miles N. of Fashoda. 13th-14th April. Nos. 345-357 ♂.

† Sexed male.

‡ Sexed female.

§ Nos. 353, 354 were males breeding, the former in the perfect adult plumage, the latter in chestnut plumage with only a few adult feathers in the wing.

o. ♂. 20 miles N. of Fashoda, 17th April. No. 372.

p-r. ♂ et ♂ imm. Kaka; 22nd April. No. 389-391.

Ad. ♂ ♀. Iris dark hazel; eyelid cobalt-blue; bill cobalt-blue, blackish at tip; legs and feet bluish-ash.

Imm. ♂. Similar to the above, but with the colours of the soft parts less pronounced, the blue of the bill being obscured.

[This beautiful Paradise-Flycatcher was rather scarce in February and March south of Jebel Ahmed-Agha, but on my return at the end of May it was very plentiful. It was somewhat shy and kept to the tops of the trees, but if I remained quiet it soon came down and shewed itself off.—R. M. H.]

70. COTILE RIPARIA.

Cotile riparia (Linn.); Sharpe, Cat. B. Brit. Mus. x. p. 96 (1885); N. C. Roths. & Wollast. p. 19.

Clivicola riparia Witherby, p. 259.

a-c. ♀. Goz-Abu-Gumar, 17th May. Nos. 494-496.

Iris hazel; bill and legs dusky.

[I saw only one small flock of Sand-Martens, in company with some Common Swallows.—R. M. H.]

71. HIRUNDO RUSTICA.

Hirundo rustica Linn.; Witherby, p. 259; Grant & Reid, p. 664; N. C. Roths. & Wollast. p. 19.

a. ♀. Goz-Abu-Gumar, 17th May. No. 493.

Iris hazel; bill black; legs and feet black.

[I noticed only one flock of Common Swallows. All Swallows were rare up the Nile. I only saw them occasionally in small parties.—R. M. H.]

72. HIRUNDO ÆTHIOPICA.

Hirundo æthiopica Blanf.; Grant, Ibis, 1900, p. 176; N. C. Roths. & Wollast. p. 19.

a, b. ♀. Fashoda, 25th & 30th March. Nos. 178, 249.

Iris hazel; bill and legs black.

[I saw several small flocks of the Ethiopian Swallow.—R. M. H.]

73. HIRUNDO RUFULA.

Hirundo rufula Temm.; Sharpe, Cat. B. Brit. Mus. x. p. 156 (1885).

a. ♂. Fashoda, 22nd March. No. 163.

Iris hazel; bill black; legs and feet black.

[Only a single example of the Red-rumped Swallow was seen.—R. M. H.]

74. *MESOPICUS PŒOCEPHALUS*.

Mesopicus goertan Hargitt, Cat. B. Brit Mus. xviii. p. 368 (1890) [part.]; Witherby, p. 265; N. C. Roths. & Wollast. p. 24.

Dendrobates poicephalus Swains. B. W. Afr. ii. p. 154 (1837).

a. ♂. Kaka, 23rd Feb. No. 64.

b, c. ♂ ♀. 20 miles N. of Fashoda. 11th April. Nos. 313, 314.

d. ♀. Kaka, 23rd April. No. 398.

Iris hazel; bill and legs dark slate-grey.

Dr. Reichenow (Orn. Monatsb. viii. p. 58, 1900) discusses this species and its allies, and recognises the typical species from Senegal and three subspecies:—

1. *Mesopicus goertan poicephalus* (Swains). *Hab.* W. Africa, Gambia to Loango.
2. *Mesopicus goertan abessinicus* Reichenow. *Hab.* Abyssinia, Kordofan, and Sennar.
3. *Mesopicus goertan centralis* Reichenow. *Hab.* Bahrel-Ghazal to Niam-Niam and Sük.

An examination of the fine series in the National Collection shews that the typical birds from Senegal certainly have, as stated by Dr. Reichenow, the back of a more golden-olive colour; but we cannot agree with him as regards the other subspecies: the characters ascribed to them do not hold good, and birds from Gambia, the White Nile, and Abyssinia are indistinguishable from one another, and all should be included under the one title, *M. pœocephalus* (Swains.).

[The Goertan Woodpecker is a fairly common bird.—R. M. H.]

75. CAMPOTHERA NUBICA.

Campothera nubica (Gmel.); Witherby, p. 265; Grant & Reid, p. 666.

a. ♂. Kaka, 13th March. No. 133.

b. ♂ imm. 20 miles N. of Fashoda. 6th April. No. 297.

Iris hazel; bill slaty grey; legs greenish ash.

[The Nubian Woodpecker is fairly common.—R. M. H.]

76. IYNGIPICUS OBSOLETUS.

Iyngipicus obsoletus (Wagl.); Hargitt, Cat. B. Brit. Mus. xviii. p. 336 (1890); Witherby, p. 265.

a, b. ♂ ♀. Fashoda, 26th March. Nos. 193, 194.

Iris light brown; bill dusky; legs greyish.

[This pigmy Woodpecker is rare: I only saw three pairs.—

R. M. H.]

77. MELANOBUCCO VIEILLOTI.

Under this title two distinct forms have been united in the 'Catalogue of Birds.' That from Abyssinia is, however, quite different from that found in West Africa, and the two should be separated as follows:—

(1) MELANOBUCCO VIEILLOTI.

Pogonias vieilloti Leach, Zool. Misc. ii. pl. 97 (1815).

Bucco fuscescens Vieill. N. Dict. d'Hist. Nat. iii. p. 241 (1816).

Melanobucco vieilloti Shelley, Cat. B. Brit. Mus. xix. p. 26 (1891) [part., Abyssinia, specimen *o*]; Witherby, p. 265.

Adult. Feathers of the middle of the back mostly white; throat, chest, and middle of the breast white, each feather with a small scarlet spot at the tip, giving these parts a *spotted* appearance; sides of the breast and flanks white, tinged with yellow, the latter shewing few, if any, black shaft-stripes.

Hab. Abyssinia and the White Nile.

No trace can now be found of Leach's type, once in the British Museum; but there can be no doubt that the bird which he figured was the spotted Abyssinian form.

a. ♂. Fashoda, 2nd April. No. 285.

b, c. ♂ ♀. Kaka, 24th April & 1st May. Nos. 399, 414.

Iris hazel; bill and legs black.

[Vieillot's Barbet is fairly well distributed, but not common.—R. M. H.]

(2) MELANOBUCCO RUBESCENS.

Le Barbu Rubicon Levaill. *Barbus*, iii., Suppl. p. 43, fig. *d* (1807).

Pogonias rubescens Temm. *Pl. Col.* iii., *Pogonias*, sp. 5 (1823).

Pogonias senegalensis Licht. *Verz. Doubl.* p. 9 (1823).

Pogonias rubicon Cuv. *Règ. Anim.* p. 457 (1829).

Pogonorhynchus vieilloti Marshall, *Monog. Capit.* p. 21, pl. xi. (1871) [Fantee].

Melanobucco vieilloti Shelley, *Cat. B. Brit. Mus.* xix. p. 26 (1891) [part., W. Africa, specimens *a-n*].

Adult. Feathers of the middle of the back brown, edged with yellowish white; throat, chest, and middle of the breast widely tipped with scarlet, giving these parts the appearance of being *heavily mottled* with scarlet; sides of the breast and flanks yellower, the latter with black middles to the feathers.

Hab. West Africa.

78. CUCULUS CANORUS.

Cuculus canorus Linn.; Shelley, *Cat. B. Brit. Mus.* xix. p. 245 (1891); Witherby, p. 264.

a. ♂. 20 miles N. of Fashoda, 14th April. No. 359.

b. ♂. Kaka, 23rd April. No. 393.

Iris yellowish brown; eyelids yellow; bill dusky, yellowish at base of lower mandible; gape orange; legs and feet dark yellow.

[I never observed the Cuckoo till April, when I heard one calling very feebly.—R. M. H.]

79. CHRYSOCOCCYX KLAASI.

Chrysococcyx klaasi Steph.; Shelley, *Cat. B. Brit. Mus.* xix. p. 283 (1891).

a. ♂. Renk, 10th May. No. 463.

Bill, legs, and feet black.

[I only saw two of the beautiful Klaas's Bronze Cuckoo.—R. M. H.]

80. COCCYSTES GLANDARIUS.

Coccytes glandarius Shelley, Cat. B. Brit. Mus. xix. p. 212 (1891); N. C. Roths. & Wollast. p. 24.

a. ♀. Kaka, 22nd April. No. 392.

b. ♂. Goz-Abu-Gumar, 19th May. No. 517.

Iris hazel; bill blackish, ochreous at base of lower mandible; legs and feet ashen.

[The Great Spotted Cuckoo was not at all common.—R. M. H.]

81. CENTROPUS SUPERCILIOSUS.

Centropus superciliosus Hempr. & Ehr.; Grant & Reid, p. 670; N. C. Roths. & Wollast. p. 24.

a. ♂. Ed-Duem, 22nd May. No. 537.

Iris bright red; bill black; legs and feet olivaceous.

[I only saw the White-eyebrowed Lark-heeled Cuckoo once.—R. M. H.]

82. CENTROPUS MONACHUS.

Centropus monachus (Rüpp.); Grant, Ibis, 1900, p. 310.

a. ♂. Kaka, 7th May. No. 443.

Iris crimson; bill, legs, and feet black.

[The Purple-headed Lark-heeled Cuckoo was very common along the river and khors. It lived amongst the long flags.—R. M. H.]

83. COLIUS MACRURUS.

Colius macrurus (Linn.); Witherby, p. 264; Grant & Reid, p. 670.

Colius macrourus pulcher Neumann, J. f. O. 1900, p. 190.

a-c. ♂ ♀. Kaka, 17th April & 1st May. Nos. 379, 380, 416.

Iris hazel; bill red, black at tip; legs and feet purplish red.

The three birds before us have the forehead very faintly tinged with fulvous and are scarcely distinguishable in this respect from what Mr. Neumann calls *C. macrourus pulcher*. We are inclined to believe that the fulvous colouring of the forehead in some individuals is adventitious and probably due to something on which the birds feed: it is apparently not caused by different surroundings.

[The Blue-naped Coly is fairly common. I took one nest in an orange-tree in Khartum; it was flat and made of sticks covered with cotton, and contained two eggs, which were white with irregular brown blotches.—R. M. H.]

84. TACHORNIS PARVA.

Tachornis parva (Licht.); Hartert, Cat. B. Brit. Mus. xvi. p. 463 (1892); N. C. Roths. & Wollast. p. 19.

a. ♂. Renk, 10th May. No. 461†.

Iris hazel; bill and legs black.

[I saw this little grey Tree-Swift in small companies on three occasions.—R. M. H.]

85. CAPRIMULGUS ÆGYPTIUS.

Caprimulgus ægyptius Licht.; Hartert, Cat. B. Brit. Mus. xvi. p. 562 (1892); N. C. Roths. & Wollast. p. 22.

a, b. ♂ ♀. Kaka, 15th March. Nos. 135 & 136.

Iris dark hazel; bill dusky; legs and feet pinkish horn-coloured.

[Only four examples of the Egyptian Nightjar were seen during the trip. They were perched on a bare hillock on a plain, and when disturbed soared in the air, like a Kite, before settling again.—R. M. H.]

86. SCOTORNIS CLIMACURUS.

Scotornis climacurus Vieill.; Hartert, Cat. B. Brit. Mus. xvi. p. 596 (1892); Witherby, p. 261; N. C. Roths. & Wollast. p. 22.

Scotornis nigricans Salvad. Atti Soc. Ital. Sc. Nat. xi. p. 450 (1868).

a, b. ♂ ♀. Jebel Ain, 11th Feb. Nos. 56, 57.

c-g. ♂ ♀ et imm. Kaka, 17th April–7th May. Nos. 374, 375, 376, 430, 447 †.

Iris dark hazel; bill horn-coloured; legs and feet fleshy brown.

Dr. Sharpe (*cf.* Hand-l. Birds, ii. p. 82) has resuscitated *S. nigricans* Salvad., which Mr. Hartert considers synonymous with *S. climacurus*. The series collected by Mr. Hawker clearly shews that the former is merely a dark form of

† Breeding.

S. climacurus, the male from Jebel Ain (No. 57) being intermediate in tint between the two types.

[The Long-tailed Nightjar was the commonest of its kind on the White Nile. It was sometimes found in companies of from four to seven under bushes. I found several clutches of its eggs, which were not previously represented in the British Museum Collection.—R. M. H.]

87. *MACRODIPTERYX MACRODIPTERUS*.

Macrodipteryx macrodipterus (Afzel.); Grant, Ibis, 1900, p. 312.

a-d. ♂ ♀ et ♂ imm. Kaka, 3rd-7th May. Nos. 427-429 & 446 †.

Iris dark hazel; bill, legs, and feet dusky.

[I met with the Standard-winged Nightjar on three occasions and procured one egg, which was laid on the bare ground near a game-path at Kaka.—R. M. H.]

88. *MELITTOPHAGUS PUSILLUS*.

Melittophagus pusillus P. L. S. Müller; Grant, Ibis, 1900, p. 313.

Merops pusillus Witherby, p. 262; N. C. Roths. & Wollast. p. 23.

a. ♂. Khartum, 23rd Jan. No. 1.

b. ♂. Fashoda. 30th March. No. 247.

c. ♂. Kaka, 29th April. No. 408.

Iris crimson; bill and legs black.

[The Rufous-winged Bee-eater was seen in a garden at Khartum, and all along the river as far south as Fashoda.—R. M. H.]

89. *MEROPS VIRIDIS*.

Merops viridis Linn.; Sharpe, Cat. B. Brit. Mus. xvii. p. 78 (1892).

Merops viridissimus Swains.; Witherby, p. 262; N. C. Roths. & Wollast. p. 23.

a, b. ♂. Kaka, 8th-13th March. Nos. 124, 131.

c. ♀. 20 miles N. of Fashoda, 8th April. No. 303.

† Breeding; egg obtained.

d. ♂. Kaka, 17th April. No. 373.

e. ♀ imm. Goz-Abu-Gumar, 16th May. No. 476.

Iris crimson; bill black; legs greyish black.

As Mr. Witherby remarks, African examples of this Bee-eater have the throat green or yellowish green, whereas in the great majority of Indian specimens the throat is blue or bluish green. At the same time, he overlooks the fact that a number of Indian birds in the British Museum Collection from Sambhur, Ahmednuggur, Chittagong, and various other parts of India and Burmah have the throat yellowish green and are indistinguishable from African examples. I therefore prefer to follow Dr. Sharpe in the 'Catalogue of Birds' and to regard all of them as belonging to one species, *M. viridis*.

[The Green Bee-eater was by no means common.—R. M. H.]

90. *MEROPS PERSICUS*.

Merops persicus Pall.; Sharpe, Cat. B. Brit. Mus. xvii. p. 66 (1892); Witherby, p. 263.

a-e. ♂ ♀. Fashoda, 22nd March. Nos. 169-173.

f, g. ♂. Kaka, 22nd April. Nos. 387, 388.

Iris crimson; bill black; legs dusky.

[I saw one flock of the Persian Bee-eater at Fashoda, and a couple of birds at Kaka.—R. M. H.]

91. *MEROPS ALBICOLLIS*.

Merops albicollis Vieill.; Sharpe, Cat. B. Brit. Mus. xvii. p. 76 (1892).

a-h. ♂ ♀. Goz-Abu-Gumar, 18th May. Nos. 500-507.

Iris crimson; bill black; legs pale ochreous.

[The lovely White-throated Bee-eater was not met with south of Goz-Abu-Gumar.—R. M. H.]

92. *MEROPS NUBICUS*.

Merops nubicus Gmel.; Grant, Ibis, 1901, p. 673.

a-e. ♂ ♀. Gebel Ain, 11th Feb. Nos. 51-55.

f. ♂. Renk, 12th May. No. 468.

Iris crimson; bill and legs black.

[We met with the beautiful Crimson-breasted Bee-eater

on Abba Island. I had lighted some reeds to smoke out rats when a flock of these birds arrived to catch the insects which had been driven out by the fire. The species was only observed in flocks in a few localities. The cry is unlike that of the typical Bee-eater.—R. M. H.]

93. *UPUPA EPOPS.

Upupa epops Linn.; Witherby, p. 263; Grant & Reid, p. 673; N. C. Roths. & Wollast. p. 23.

[The Hoopoe was distributed all along the river, but was not common.—R. M. H.]

94. IRRISOR ERYTHORHYNCHUS.

Irrisor erythrorhynchus Grant, Bull. B.O.C. xii. no. lxxxiv. pp. 36, 37 (1901).

a, b. ♂ et ♂ imm. Fashoda, 31st March. Nos. 257, 258.

c, d. ♀. Goz-Abu-Gumar, 18th May. Nos. 510; 511.
Iris hazel; bill and feet red.

Mr. Hawker's specimens belong to the true *I. erythrorhynchus* (Lath.).

[The Red-billed Wood-Hoopoe was generally found in flocks and made a great deal of noise.—R. M. H.]

In the 'Catalogue of Birds' Salvin divided the forms of *Irrisor* with the head metallic green or purple into two species as follows:—

1. *I. viridis*. With the tail more or less purple.
2. *I. erythrorhynchus*. With the tail more or less greenish blue.

The colour of the tail cannot, however, be relied on as a specific distinction.

Salvin considered that the birds with black bills were merely the young of those with red bills. It is perfectly true that in the red-billed forms the young have the bill dusky, but there can be little doubt that the great majority of the specimens considered by him to be the young of *I. erythrorhynchus* represent distinct species. Young birds may be recognised by the buff feathers on the chin and throat. The whole group appears to be much in need of

revision, and I propose the following arrangement of the species in Salvin's first section :—

- I. Head and throat metallic green, or black glossed with purplish; wings and tail with white spots.
- A. Bill scarlet in the adult bird (dusky or partly dusky in the immature).
- a. Back metallic green.
- a'. Tail longer, 9·0–10·0 inches; white band on quills wider, 0·9–1·1 inch in width *I. erythrorhynchus*.
- b'. Tail shorter, 7·0–8·0 inches; white band on quills narrower, 0·5 inch in width *I. viridis*.
- b. Back sooty black with a purplish-bronze gloss. *I. damarensis*.
- B. Bill black in the adult bird.
- c. Head, nape, and back glossed with metallic green and purplish blue *I. melanorhynchus*.
- d. Nape and back velvety black, slightly glossed with dull purplish blue; crown of the head very similar, but with indistinct green bronze-edged spots *I. somaliensis*.
- II. Head and throat buff or white; wings and tail spotless *I. jacksoni*, &c.

The synonymy of these different species should stand as follows :—

(1) *IRRISOR ERYTHORHYNCHUS*.

Upupa erythrorhynchus Lath. Ind. Orn. i. p. 280 (1790).

Promerops purpureus Shaw & Miller, Cimel. Phys. pl. 52 (1796).

Irrisor erythrorhynchus Salvin, Cat. B. Brit. Mus. xvi. p. 19 (1892) [part. spec. *f, g, l, v, w*].

Irrisor viridis Salvin (nec Licht.), Cat. B. Brit. Mus. xvi. p. 17 (1892) [part. spec. *a-t, v, and o'*].

Hab. † WEST AFRICA: Loando; Gold Coast. NORTH-EAST AFRICA: Darfur; Goz-Abu-Gumar, White Nile; Fashoda; mouth of Zeraf River. EQUATORIAL AFRICA: Niam-Niam, Uganda, Lake Baringo. EAST AFRICA: Mombasa, Dar-es-Salaam, Mamboio, Ugogo, Usambara, Nyasaland, Shiré River. SOUTH-EAST AFRICA: Mashonaland, Matabeleland, Makalaka Country, Transvaal, Natal.

† The localities given are those of the British Museum Collection.

(2) *IRRISOR VIRIDIS*.

Upupa viridis A. A. H. Licht. Cat. Rer. Nat. Hamb. p. 22 (1793) ["Kaffir-land"].

Irrisor capensis Less. Traité d'Orn. p. 239 (1831).

Irrisor viridis Salvin, Cat. B. Brit. Mus. xvi. p. 17 (1892) [part. spec. *u* and *w-c'*].

Hab. SOUTH AFRICA: Swaziland, Natal; Knysna, in Cape Colony.

The Swaziland bird is somewhat intermediate between *I. erythrorhynchus* and *I. viridis*, having the wider white band across the quills of the former species, and the shorter tail of the latter.

(3) *IRRISOR DAMARENSIS*, sp. n. (Pl. X. fig. 1.)

Irrisor viridis Salvin, Cat. B. Brit. Mus. xvi. p. 17 (1892) [part. spec. *d'-n'*].

Adult. Crown, nape, back, breast, and sides sooty black, with a purplish-bronze gloss, the crown spangled with metallic green bronze-edged spots; chin and throat dark metallic green; white band across the primaries 0·9–1·1 inch wide; bill red. Total length ca. 17·0 inches; culmen of ♂ 2·2, of ♀ 1·7; wing 5·7–6·4; tail 9·6–10·3.

Hab. SOUTH-WEST AFRICA: Damaraland. EAST AFRICA: Kibwezi, Ngomeni, and Machakos, B. E. Africa.

The birds from British East Africa have the white band across the quills somewhat narrower than in typical Damaraland birds, but are otherwise identical.

(4) *IRRISOR MELANORHYNCHUS*.

Nectarinia melanorhynchus Licht. Verz. Doubl. p. 15 (1823) [Senegal].

Falcinellus senegalensis Vieill. Enc. Méth. ii. p. 580 (1823).

Irrisor erythrorhynchus Salvin, Cat. B. Brit. Mus. xvi. p. 19 (1892) [part. spec. *a-e*, *h-k*, and *m-u*].

Hab. W. AFRICA: Senegambia; also N.E. AFRICA: Bogosland and Tigre, N. Abyssinia.

I cannot distinguish the Abyssinian birds from West-African specimens.



1. IRRISOP DAMARENSIS
2. IRRISOP SOMALIENSIS.

(5) *IRRISOR SOMALIENSIS*, sp. n. (Pl. X. fig. 2.)

Adult. Top of the head blackish, with indistinct green bronze-edged spots; nape, back, and breast velvety black, slightly glossed with dull purplish blue; upper throat dark steel-blue, lower throat metallic green; rest of under parts brownish black; bill black. Total length ca. 17·0 inches; culmen of ♂ 2·5, of ♀ 1·8; wing 5·5–6·1; tail 8·0–9·3.

Hab. N.E. AFRICA: Somaliland.

95. *SCOPTELUS NOTATUS*.

Scoptelus notatus Salvin; Salvin, Cat. B. Brit. Mus. xvi. p. 22 (1892).

a, b. ♀. Fashoda, 26th Mar. & 2nd April. Nos. 190, 283.

c. ♂. 20 miles N. of Fashoda, 15th April. No. 361.

The *adult male* has the tips of the flight-feathers and the sides of the head, throat, and under parts purplish black.

The *adult female* differs from the adult male in having the tips of the primaries brownish white and the sides of the face, chin, throat, and breast sooty brown.

In the 'Catalogue of Birds' Salvin describes these differences as due to age; but this is not the case, though it is true that the young male resembles the female.

[The Straight-billed Wood-Hoopoe was plentifully distributed south of Jebel Ahmed-Agha. It was always seen in pairs.—R. M. H.]

96. *LOPHOCEROS ERYTHORRHYNCHUS*.

Lophoceros erythrorhynchus (Temm.); Witherby, p. 263; Grant & Reid, p. 675.

a-d. ♂ ♀ et ♂ ♀ imm. 20 miles N. of Fashoda, 6th–16th April. Nos. 292, 293, 320, 369.

Ad. Iris hazel; bill reddish, lighter at base, a black streak on lower mandible; legs black.

[The Red-billed Hornbill was fairly common, but very wild. I found it nesting inside a tree, but could not cut out the wood to see if there were any eggs.—R. M. H.]

97. *CERYLE RUDIS*.

Ceryle rudis (Linn.); Witherby, p. 264; Grant & Reid, p. 676; N. C. Roths. & Wollast. p. 24.

a. ♀. Renk, 12th May. No. 466.

Iris hazel; bill yellow; legs olivaceous.

[I only saw the African Roller once.—R. M. H.]

102. *CORACIAS ABYSSINICUS*.

Coracias abyssinicus Bodd.; Witherby, p. 262; Grant & Reid, p. 678; N. C. Roths. & Wollast. p. 22.

a-c. ♂ et ♂ imm. Kaka, 24th-30th April. Nos. 404, 405, 412.

d. ♀ †. Goz-Abu-Gumar, 16th May. No. 478.

Iris hazel; bill blackish, horn-coloured at base; legs olivaceous.

[The Abyssinian Roller was fairly common and was generally found in pairs. It was usually to be seen sitting on the top of a tree or perched upon a reed on the look out for insects.—R. M. H.]

103. *PALÆORNIS DOCILIS*.

Palæornis docilis Vieill.; Salvad. Cat. B. Brit. Mus. xx. p. 447 (1891).

a-k. ♂ ♀ et ♂ ♀ imm. Goz-Abu-Gumar, 16th-19th May. Nos. 479, 481-484, 519-523.

Iris pale straw-colour; bill red, blackish at tip and on lower mandible; legs and feet grey.

[The African Ringed Parrakeet was very common about Abba Island, but I did not see it either to the north or the south of that locality.—R. M. H.]

104. *SCOPS LEUCOTIS*.

Scops leucotis (Temm.); Sharpe, Cat. B. Brit. Mus. ii. p. 97 (1875); Witherby, p. 268.

Pisorhina leucotis (Temm.); N. C. Roths. & Wollast. p. 27.

a. ♂. Goz-Abu-Gumar, 16th May. No. 473.

Iris orange-yellow; bill horn-coloured.

[I only saw one specimen of the White-eared Scops Owl. It was sitting quite upright, on a high branch of a *Mimosa nilotica* and looked more like a dead stick than a bird.—R. M. H.]

† Breeding.

105. *BUBO LACTEUS*.

Bubo lacteus (Temm.); Witherby, p. 269; Grant & Reid, p. 680.

a, b. ♂ ♀. Kaka, 24th April. Nos. 402, 403.

c, d. ♂ ♀. Near Renk, 14th May. Nos. 574, 575.

Iris dark hazel; bill and cere white; gape and orbits flesh-coloured; feet whitish horn-coloured.

[Verreaux's Eagle-Owl was not very common. I saw it in pairs, but never found its nest.—R. M. H.]

106. *BUBO CINERASCENS*.

(Grey Phase.)

Bubo cinerascens (Guérin); Sharpe, Cat. B. Brit. Mus. ii. p. 32 (1875).

a. ♂ imm. 20 miles N. of Fashoda, 22nd April. No. 383.

b. No particulars.

Iris dark hazel; bill black, lighter on lower mandible; claws black.

[The Grey Eagle-Owl was rather common. When once disturbed it was very difficult to get near it again. I found several sets of young birds: some on the ground at the roots of trees, and others in the hollows formed by the branches and the tops of the trunks. One old bird attacked me and struck me several times on the helmet when I was climbing the tree in which it had its brood. I also found young of this species in an old Kite's nest.—R. M. H.]

(Rufous Phase.)

Bubo abyssinicus (Guérin); Sharpe, Ibis, 1898, p. 289; Oates, Cat. Eggs Brit. Mus. ii. p. 379 (1902).

a. ♀. Kaka, 21st April. No. 381.

Iris brown; bill black; cere horn-coloured; feet dusky.

[The rufous phase of the Grey Eagle-Owl was fairly common south of Jebel Ahmed-Agha, where two eggs were procured. They were not previously represented in the British Museum Collection.—R. M. H.]

There can be little doubt that the *B. cinerascens* and *B. abyssinicus* of Guérin are merely phases of one species. For some unknown reason Dr. Reichenow [*cf.* Vög. Afr. i.

pt. ii. p. 661 (1901)] places the latter under the genus *Asio*; though Dr. Sharpe has carefully pointed out that the bird is a true *Bubo*, as is shewn by the shape of the oral orifice.

107. STRIX FLAMMEA.

Strix flammea Linn.; Sharpe, Cat. B. Brit. Mus. ii. p. 291 (1875); Witherby, p. 268.

Strix flammea maculata Brehm; N. C. Roths. & Wollast. p. 26.

a. ♂. Kaka, 24th April. No. 406.

b. ♂. Goz-Abu-Gumar, 16th May. No. 480.

Iris dark hazel; bill flesh- or horn-coloured.

[The Barn-Owl was not at all common. I saw only four birds in all. They were wild and difficult to get near.—R. M. H.]

108. *SERPENTARIUS SECRETARIUS.

Serpentarius secretarius (Scop.); Sharpe, Cat. B. Brit. Mus. i. p. 45 (1874).

[The Secretary-Bird was very rare, and I saw only three, one near Kaka and two near Renk. It was very wild and would not let me get within 300 yards of it. It soared to a great height.—R. M. H.]

109. *GYPS RUEPELLI.

Gyps rueppelli (Brehm); Sharpe, Cat. B. Brit. Mus. i. p. 9 (1874); Witherby, p. 270; N. C. Roths. & Wollast. p. 28.

[This large Vulture was common along the river south of Goz-Abu-Gumar. It always appeared when any large game was killed. The Black-and-White Crow was the first bird to arrive at such times, and was followed by Kites, *Neophron monachus*, *Gyps rueppelli*, and *Otogyps auricularis*, in order, while the Marabou Stork brought up the rear.]

110. *OTOGYPS AURICULARIS.

Otogyps auricularis (Daud.); Sharpe, Cat. B. Brit. Mus. i. p. 13 (1874).

[This Vulture was fairly common south of Jebel Ahmed-Agha. It was much shyer than the other Vultures and not so numerous as *G. rueppelli*.—R. M. H.]

111. *NEOPHRON PERCNOPTERUS.

Neophron percnopterus (Linn.); Sharpe, Cat. B. Brit. Mus. i. p. 17 (1874); Witherby, p. 271; N. C. Roths. & Wollast. p. 29.

[The Egyptian Vulture was common about Khartum, but was rarer further south.—R. M. H.]

112. *NEOPHRON MONACHUS.

Neophron monachus (Temm.); Sharpe, Cat. B. Brit. Mus. i. p. 19 (1874).

[This Vulture was very common south of Renk. It came round the camp and helped to clear away scraps of meat, while it was useful in cleaning up the skulls of the larger game.—R. M. H.]

113. CIRCUS ÆRUGINOSUS.

Circus æruginosus (Linn.); Sharpe, Cat. B. Brit. Mus. i. p. 69 (1874); Grant, Ibis, 1901, p. 292.

a. ♀. Fashoda, 21st March. No. 153.

Iris brown; bill, cere, and gape horn-coloured; legs and feet dirty yellow.

[We found the Marsh-Harrier fairly common.—R. M. H.]

114. MILVUS ÆGYPTIUS.

Milvus ægyptius (Gmel.); Witherby, p. 270; Grant & Reid, p. 681; N. C. Roths. & Wollast. p. 28; Oates, Cat. Eggs Brit. Mus. ii. pp. 285, 378 (1902).

a, b. ♀. Kaka, 2nd March. No. 97.

c. ♀. Fashoda, 29th March. No. 234 †.

d. ♂ pull. Fashoda, 2nd April. No. 289.

e. Pull. Fashoda, 2nd April. No. 290.

Adult. Iris hazel; bill, cere, gape, orbits, legs, and feet yellow.

Pull. Iris dark hazel; bill slaty grey, yellow at base; legs and feet yellowish white.

[I found many Egyptian Kites breeding near Fashoda. The nests were generally made of sticks, but I saw several made of reeds; we procured five sets of two eggs each. These Kites used to follow us when walking through the long

† Breeding; eggs taken.

grass, and dash down at the locusts which we disturbed. They were very useful, as they followed buffalos and other game, and so shewed the line which the animals were taking through the long grass. When they stopped the Kites left them; but directly they moved on the Kites would return and keep stooping at the locusts.—R. M. H.]

115. MELIERAX POLYZONUS.

Melierax polyzonus (Rüpp.); Witherby, p. 270; Grant & Reid, p. 682; Oates, Cat. Eggs Brit. Mus. ii. p. 377.

a. ♀. Jebel Auli, 4th Feb. No. 40.

b. ♂. Kaka, 2nd March. No. 98.

c. ♂ pull. Kaka, 22nd April. No. 384.

Adult. Iris dark hazel; cere and base of upper mandible coral-red; culmen and tip of lower mandible black; legs and feet coral-red.

Pull. Iris dark hazel; bill blackish grey; cere, gape, and orbits yellowish; legs and feet yellowish flesh-coloured.

[The Many-banded Goshawk was very common. I took two nests with eggs. One of them was evidently the old structure of some other bird; the second was loosely constructed of sticks and placed on the horizontal branch of a mimosa. The eggs of this species are new to the British Museum Collection.—R. M. H.]

116. MELIERAX GABAR.

Melierax gabar (Daud.); Grant & Reid, p. 682; N. C. Roths. & Wollast. p. 28.

a. ♂. Kaka, 24th April. No. 401.

b. ♂. Goz-Abu-Gumar, 16th May. No. 474.

Iris hazel; bill black; gape, cere, orbits, legs, and feet red.

[The Red-faced Goshawk was only seen on three occasions.—R. M. H.]

117. LOPHOAËTUS OCCIPITALIS.

Lophoaëtus occipitalis (Daud.); Grant, Ibis, 1900, p. 321; Oates, Cat. Eggs Brit. Mus. ii. p. 274 (1902).

a, b. ♂ ♀. Fashoda. 21st March. Nos. 155, 156 †.

† A pair breeding; eggs taken.

Iris orange-yellow; bill black, slaty grey at base; cere and orbit greenish dusky; legs and feet pale yellow.

[I saw the Black-crested Eagle fairly often. It was generally sitting at the top of a tree on the look out, and was rather hard to shoot. At other times it might be seen soaring fairly high. I found two nests with two eggs in each; they were placed in trees and were rather small structures of sticks, lined with a few leaves, the eggs being covered with some greener leaves. The eggs of this species are new to the British Museum Collection.—R. M. H.]

118. *BUTASTUR RUFIPENNIS*.

Butastur rufipennis (Sund.); Grant, *Ibis*, 1900, p. 320; Oates, *Cat. Eggs Brit. Mus.* ii. p. 378 (1902).

a. ♂. Fashoda. 25th March. No. 177.

b. ♀. 20 miles N. of Fashoda. 8th April. No. 308.

c. ♀. 20 miles N. of Fashoda. 10th April. No. 310.

Iris golden yellow; bill yellow at base, bluish grey at tip; legs and feet yellow.

[The Red-winged Goshawk was fairly common south of Jebel Ahmed-Agha. It was generally seen sitting on a stick or reed on the flats near the river. Now and then it would dash at some insect or lizard on the ground and then return to its perch. It also, when hunting, soared in smallish circles. When above the observer the reddish-brown colour was very conspicuous. It makes a very small stick-nest lined with a few leaves, measuring about a foot across. The eggs are from one to three in number. The eggs of this species were not previously represented in the British Museum Collection.—R. M. H.]

119. **HELOTARSUS ECAUDATUS*.

Helotarsus ecaudatus (Daud.); Sharpe, *Cat. B. Brit. Mus.* i. p. 300 (1874); Witherby, p. 270; Grant, *Ibis*, 1901, p. 294; N. C. Roths. & Wollast. p. 29.

Helotarsus leuconotus Rüpp.; Sharpe, l. c. p. 301 (1874).

[I only saw the Bateleur Eagle on three occasions—once at Kowa, once near Kaka, and again near Fashoda.—R. M. H.]

120. HALIAËTUS VOCIFER.

Haliaëtus vocifer (Daud.); Witherby, p. 270; Grant & Reid, p. 682.

a. ♂. Ed-Duem. 23rd May. No. 568.

Iris light brown, mottled with dark brown; cere and orbits yellow; legs and feet flesh-coloured.

[The Vociferous Sea-Eagle was seen the whole way along the Nile and on the khors inland. I observed it several times feeding on fish that had died and had been washed ashore.—R. M. H.]

121. FALCO FELDEGGI.

Falco feldeggii Schl.; Sharpe, Cat. B. Brit. Mus. i. p. 389 (1874); Oates, Cat. Eggs Brit. Mus. ii. pp. 299, 378 (1902).

a. ♀. Fashoda, 21st March. No. 157.

Iris hazel; bill dark slate-grey, yellowish at base; cere and orbits ochreous; legs and feet yellow.

[We found the Lanner Falcon fairly common, and obtained a clutch of four eggs at Fashoda.—R. M. H.]

122. FALCO RUFICOLLIS.

Falco ruficollis Swains.; Sharpe, Cat. B. Brit. Mus. i. p. 404 (1874); Oates, Cat. Eggs Brit. Mus. ii. p. 378 (1902).

a. ♀. 20 miles N. of Fashoda, 8th April. No. 309.

b. ♂. 20 miles N. of Fashoda, 13th April. No. 343.

c. ♂ [♀] †. 20 miles N. of Fashoda. 16th April. No. 368.

d. ♂. Kaka, 2nd May. No. 426.

a & c. Iris dark hazel; bill bluish black, yellow at base; cere and orbits yellow; legs and feet gamboge-yellow.

b & d. Iris hazel; bill blue-black, ochreous yellow at base; legs and feet gamboge-yellow.

[This pretty little Red-headed Falcon was fairly common near Fashoda. I found three young and an addled egg in an old Kite's nest. The egg of this species is new to the British Museum Collection.—R. M. H.]

† Obviously a female.

123. CERCHNEIS TINNUNCULUS.

Cerchneis tinnunculus (Linn.); Grant & Reid, p. 683.

a. ♀. Wad Shali, 5th Feb. No. 41.

b. ♂. Jebel Ain, 11th Feb. No. 58.

Iris hazel; bill bluish slate-coloured; legs and feet ochreous yellow.

[I saw large flocks of the Kestrel in February near Ed-Duem soaring high over the river. Further south it was very rarely met with.—R. M. H.]

124. PHALACROCORAX AFRICANUS.

Phalacrocorax africanus (Gmel.); Witherby, p. 273; Grant & Reid, p. 683; N. C. Roths. & Wollast. p. 30.

a, b. ♀. Ed-Duem, 20th May. Nos. 532, 533.

Iris light red; bill and bare skin yellow, dusky on culmen; legs and feet black.

These two examples of the Little African Shag are in winter plumage.

125. *PLOTUS RUFUS.

Plotus rufus Lacép.; Grant & Reid, p. 683.

[Darters were common all along the river.—R. M. H.]

126. *PELECANUS ONOCROTALUS.

Pelecanus onocrotalus Linn.; Grant, Cat. B. Brit. Mus. xxvi. p. 462 (1898); Witherby, p. 273; N. C. Roths. & Wollast. p. 30.

[Pelicans were common. They came to roost on some of the khors in thousands, and flew off in the morning just after sunrise to their fishing-grounds.—R. M. H.]

127. *PHÆNICOPTERUS ROSEUS.

Phœnicopterus roseus Pall.; Salvad. Cat. B. Brit. Mus. xxvii. p. 12 (1895); Witherby, p. 274.

[I observed Flamingoes only on two occasions near Kaka.—R. M. H.]

128. *PLECTROPTERUS RUEPELLI.

Plectropterus rueppelli Scl.; Witherby, p. 275; Grant & Reid, p. 683.

[The Spur-winged Goose was very common. Its flesh was coarse and had an extremely unpleasant flavour.—R. M. H.]

129. SARCIDIORNIS MELANONOTA.

Sarcidiornis melanonota (Penn.) ; Salvad. Cat. B. Brit. Mus. xxvii. p. 54 (1895).

a, b. ♂ ♀. Fashoda, 26th–31st March. Nos. 214 & 269.
Iris hazel ; bill black ; legs and feet greyish black.

[The Black-backed or Comb Goose was fairly common and proved good eating.—R. M. H.]

130. CHENALOPEX ÆGYPTIACA.

Chenalopex ægyptiaca Linn. ; Witherby, p. 274 ; Grant & Reid, p. 684 ; N. C. Roths. & Wollast. p. 31.

a, b. ♂ ♀. Ed-Duem, 23rd May. Nos. 570, 571.

Iris golden yellow ; bill flesh-coloured, margined with pinkish brown ; nail and knob dusky ; legs and feet flesh-coloured.

[The Egyptian Goose was very common all along the river. I found it in full moult in February, and also saw goslings of all sizes.—R. M. H.]

131. DENDROCYCNA VIDUATA.

Dendrocygna viduata Linn. ; Salvad. Cat. B. Brit. Mus. xxvii. p. 145 (1895) ; Witherby, p. 275.

a-g. ♂ ♀ ad. et imm. Kaka, 23rd Feb.–15th March. Nos. 68–70, 73, 122, 123, 138.

h. ♂. Fashoda, 29th March. No. 241.

i. ♂. Jebel Auli, 25th May.

Iris hazel ; bill blackish, bluish on the band across the tip and bluish round the nasal openings ; legs and feet bluish grey, lead-coloured on the webs.

[The White-faced Tree-Duck was very common all along the river and on the khors. It is very good eating.—R. M. H.]

132. *DAFILA ACUTA.

Dafila acuta (Linn.) ; Witherby, p. 275 ; N. C. Roths. & Wollast. p. 31.

[The Pintail Duck was fairly common as far south as El-Kawa. I shot one at the end of May near Ed-Duem.—R. M. H.]

133. *SPATULA CLYPEATA.

Spatula clypeata (Linn.); Grant, Ibis, 1900, p. 324.

[The Shoveller was common. I saw very large flocks on a khor west of Fashoda in April.—R. M. H.]

134. *NETTION CRECCA.

Nettion crecca (Linn.); Grant, Ibis, 1900, p. 323; N. C. Roths. & Wollast. p. 31.

[I shot several Teal near Fashoda in May.—R. M. H.]

135. QUERQUEDULA CIRCIA.

Querquedula circia Linn.; Grant & Reid, p. 685.

a. ♂. Fashoda, 25th March. No. 176.

Iris hazel; bill, legs, and feet dusky.

[The Garganey was very common.—R. M. H.]

136. SCOPUS UMBRETTA.

Scopus umbretta (Gmel.); Grant & Reid, p. 685.

a. ♂. Kaka, 5th May. No. 435.

Iris hazel; bill, legs, and feet black.

[I observed only a few Hammer-heads. They were generally seen feeding along the khors.—R. M. H.]

137. ABDIMIA ABDIMII.

Abdimia abdimii (Licht.); Grant, Ibis, 1900, p. 326; Oates, Cat. Eggs Brit. Mus. ii. p. 375 (1902).

a. ♀. Fashoda, 31st March. No. 266.

Iris hazel; bill greenish, reddish at tip; cheeks dark blue; bare skin round eye red; throat red; legs olivaceous, feet and knee-joints pink.

[The White-bellied Stork is common from Fashoda to Khartum. I took three eggs out of a nest which was built in a tree in the middle of a Shilluk village. The eggs of this bird were not previously represented in the British Museum Collection.—R. M. H.]

138. DISSURA EPISCOPUS.

Dissura episcopus (Bodd.); Grant, Ibis, 1900, p. 326.

a. ♀. 20 miles N. of Fashoda, 16th April. No. 367.

Iris hazel; bill blackish red, darker along crest of culmen; bare skin on head dark blue; legs greyish black.

[We did not find the White-necked Stork very common. It was generally seen feeding on newly burnt ground.—R. M. H.]

139. *CICONIA ALBA.

Ciconia ciconia (Linn.) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 299 (1898).

Ciconia alba Witherby, p. 272 ; N. C. Roths. & Wollast. p. 29.

[White Storks were plentiful on our way up the river from Omdurman to Abba Island, but were not observed on our return at the end of May.—R. M. H.]

140. *CICONIA NIGRA.

Ciconia nigra Bechst. ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 303 (1898) ; Witherby, p. 272 ; N. C. Roths. & Wollast. p. 29.

[I noticed the Black Stork in February between Ed-Duem and Omdurman.—R. M. H.]

141. ANASTOMUS LAMELLIGERUS.

Anastomus lamelligerus Temm. ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 308 (1898) ; Witherby, p. 273 ; N. C. Roths. & Wollast. p. 30.

a. ♂. Ed-Duem, 23rd May. No. 569.

Iris brown, with a golden ring round the pupil ; bill dusky, reddish at base ; legs and feet black.

[We found the Open-billed Stork common along the river. It was breeding in April near Fashoda.—R. M. H.]

142. EPHIPIORHYNCHUS SENEGALENSIS.

Ephippiorhynchus senegalensis (Shaw) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 312.

a, b. Ad. (heads only). Kaka, 15th March. No. 169.

[The Senegal Jabiru, or Saddle-billed Stork, was not common, and was generally found in pairs feeding on frogs in the swamps. I procured two specimens, but both skins were destroyed by beetles. It was not observed north of Jebel Ahmed-Agha.—R. M. H.]

143. *LEPTOPTILUS CRUMENIFERUS.

Leptoptilus crumeniferus (Cuv.); Sharpe, Cat. B. Brit. Mus. xxvi. p. 319 (1898); Witherby, p. 273; N. C. Roths. & Wollast. p. 30.

[The Adjutant-Bird, or Marabou Stork, was common. It seemed to be able to get its food either on land or from the water. It followed in the wake of fires to feed on the scorched insects and reptiles. It attended the death of any animal, and I also once saw it standing in a swamp on the look out for fishes and frogs.—R. M. H.]

144. PSEUDOTANTALUS IBIS.

Pseudotantalus ibis (Linn.); Sharpe, Cat. B. Brit. Mus. xxvi. p. 327 (1898); Witherby, p. 273.

a. ♂. Fashoda, 31st March. No. 267.

Iris greyish; bill ochreous; cheeks light red; legs red at upper end of tibia, shading into pink on the tarsus and feet.

The male brought home by Mr. Hawker—apparently a fully adult bird—has all the freshly-moulted upper wing-coverts uniform white tinged with rose, while only a few hidden feathers of the greater upper wing-coverts, scapulars, and tail-coverts—all in worn condition—shew the lake bars characteristic of what has generally been recognised as the adult plumage. I am of opinion that further investigation will prove that the African Wood-Ibis *has distinct winter and summer plumages*. In the former all the upper wing-coverts, &c. are barred with lake; in the latter these parts are uniform white, tinged with rose, as in the bird from Fashoda. To satisfactorily settle this interesting point (which, so far as I am aware, has never previously been suggested), it would be necessary to examine a few adult birds shot in different months of the year and properly labelled. Mr. Hawker's bird is the only specimen in the British Museum with a label bearing the *date* and other particulars.

It is to be hoped that collectors in Africa will look more closely into this matter.

[I saw the Wood-Ibis in flocks, generally feeding in places which had just been burnt.—R. M. H.]

145. IBIS ÆTHIOPICA.

Ibis æthiopica (Lath.) ; Witherby, p. 271 ; Grant & Reid, p. 686.

a. ♂. El-Kawa, 19th May. No. 526.

Iris hazel ; bill, legs, and feet black.

[The Sacred Ibis was fairly common.—R. M. H.]

146. PLEGADIS FALCINELLUS.

Plegadis falcinellus (Linn.) ; Witherby, p. 271 ; Grant & Reid, p. 686.

a, b. ♂. Jebel Ain, 11th February. Nos. 49, 50.

Iris dark hazel ; bill, legs, and feet black.

[The Glossy Ibis was distributed all along the river, but was not very plentiful.—R. M. H.]

147. HAGEDASHIA HAGEDASH.

Hagedashia hagedash (Lath.) ; Grant, *Ibis*, 1900, p. 325 ; Witherby, p. 271.

a. ♂. Kawa, 19th May. No. 527.

Iris hazel, with an outer ring of pearly white ; bill black, vinaceous on the culmen ; legs and feet black, red on the upper surface of the toes.

[The Hadadah Ibis was common along the river. When disturbed it makes a great noise, which sounds like "Whā-hā-hā." At night it roosts in trees in company with Egrets and Herons.—R. M. H.]

148. PLATALEA LEUCORODIA.

Platalea leucorodia (Linn.) ; Sharpe, *Cat. B. Brit. Mus.* xxvi. p. 44 (1898) ; N. C. Roths. & Wollast. p. 30.

a. Imm. Ed-Duem, 25th May.

An immature specimen of the Spoonbill, with the two outer primary-quills largely brownish black, the third, fourth, and eighth to tenth quills tipped with the same colour, and all with dark shafts.

149. PLATALEA ALBA.

Platalea alba Scop. ; Witherby, p. 271 ; Grant & Reid, p. 686.

a, b. ♀. Ed-Duem, 25th May. Nos. 572 & 573.

These two fine adult females of the African Spoonbill have the iris pearly white, the bill blue-grey clouded with pink and margined with a pink border crenulated on the inner edge, the bare skin on the face and throat pink, darker on the forehead, and the legs and feet whitish pink.

150. *ARDEA PURPUREA.

Phoyx purpurea (Linn.) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 60 (1898) ; Witherby, p. 272.

[The Purple Heron was fairly common.—R. M. H.]

151. ARDEA GOLIATH.

Ardea goliath Cretzschm. ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 66 (1898).

a. ♂. Kaka, 7th May. No. 459.

Iris yellow ; bill dusky, paler below ; legs and feet greyish black.

[The Giant Heron was very common, and was always observed singly. It may sometimes be seen standing in a curious attitude with the tips of its wings crossed in front of its feet.—R. M. H.]

152. ARDEA MELANOCEPHALA.

Ardea melanocephala Vig. & Childr. ; Grant, Ibis, 1900, p. 325.

a. ♂. Kaka, 8th March. No. 121.

b. ♂. Fashoda, 30th March. No. 254.

Iris straw-coloured ; bill dark greyish black, lighter at the base and on the under mandible ; bare skin below the eyes with a greenish tint, yellowish from eye to nostril ; legs black, with a faint vinaceous tint on the back of the tarsus.

[The Great Black-headed Heron was fairly common and generally solitary in its habits. The stomach of No. 254 contained two rats, remains of coleoptera, and a parasitic worm.—R. M. H.]

153. *ARDEA CINEREA.

Ardea cinerea Linn. ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 74 (1898) ; Witherby, p. 272.

[The Common Heron was plentiful along the khors.—R. M. H.]

154. MESOPHOYX BRACHYRHYNCHA.

Mesophoyx brachyrhyncha (Brehm) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 87 (1898) ; Grant, Ibis, 1901, p. 295.

a. ♀. Fashoda, 31st March. No. 265.

Iris yellow ; bill yellow ; bare skin in front of eyes pale green ; legs and feet black.

This female is perhaps not fully adult, the ornamental plumes of the back measuring only about nine inches (in the adult male they attain twice that length), and the bare portions of the tibio-tarsi being black, with merely indications of yellowish where the feathering begins.

[The Short-billed Egret is fairly common.—R. M. H.]

155. HERODIAS ALBA.

Herodias alba (Linn.) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 90 (1898) ; Witherby, p. 272 ; N. C. Roths. & Wollast. p. 29.

a. ♂. Kaka, 5th March. No. 111.

b. ♂. El-Kawa, 19th May. No. 528.

Of these two examples of the Great White Egret one (spec. *a*) is in full breeding-dress, with the dorsal plumes fully developed, the other (spec. *b*) in somewhat worn condition, many of the long plumes having already been cast. Both have the iris pale straw-coloured, the *bill ochreous yellow*, the bare skin round the eyes pale green, and the legs and feet black. According to the 'Catalogue of Birds' (xxvi. p. 92), the bill is *black* in the breeding-plumage, yellow in winter.

156. NYCTICORAX NYCTICORAX.

Nycticorax nycticorax (Linn.) ; Grant & Reid, p. 687.

Nycticorax griseus (Linn.) ; N. C. Roths. & Wollast. p. 29.

a. ♀ imm. Fashoda, 30th March. No. 253.

Iris yellow ; bill dusky, greenish at base ; bare skin in front of eyes green ; legs and feet green.

[I saw several colonies of the Night-Heron, and found the birds very shy.—R. M. H.]

157. ARDEOLA RALLOIDES.

Ardeola ralloides (Scop.) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 202 (1898).

Herodias ralloides (Scop.) ; Witherby, p. 271.

a. ♀. Fashoda, 21st March. No. 152.

A female Squacco Heron has the iris pale straw-coloured, the bill greyish yellow, the legs and feet olivaceous, the hinder part of the metatarsus and the soles of the feet yellow.

158. BUBULCUS LUCIDUS.

Bubulcus lucidus (Raf.) ; Grant & Reid, p. 687 ; N. C. Roths. & Wollast. p. 29.

Herodias bubulcus (Aud.) ; Witherby, p. 272.

a-c. ♀ et ♂ imm. Kawa, 20th May. Nos. 529-531.

Iris yellow ; bill and toes yellow ; tibiæ greenish-yellow, shading into dusky on the lower part of the tarsi and feet.

[I saw the Buff-backed Heron in small flocks. It is fairly common along the river.—R. M. H.]

159. *ARDETTA MINUTA.

Ardetta minuta (Linn.) ; Sharpe, Cat. B. Brit. Mus. xxvi. p. 222 (1898) ; Witherby, p. 272.

[The Little Bittern was not common south of El-Kawa. I saw one pair near Kaka.—R. M. H.]

160. *GRUS GRUS.

Grus grus (Linn.) ; Grant, Ibis, 1901, p. 293.

Grus cinerea Bechst. ; Witherby, p. 277.

[Cranes were common in February between Ed-Duem and El-Kawa ; but I saw none on my return in May.—R. M. H.]

161. BALEARICA PAVONINA.

Balearica pavonina (Linn.) ; Sharpe, Cat. B. Brit. Mus. xxiii. p. 272 (1894) ; Witherby, p. 276.

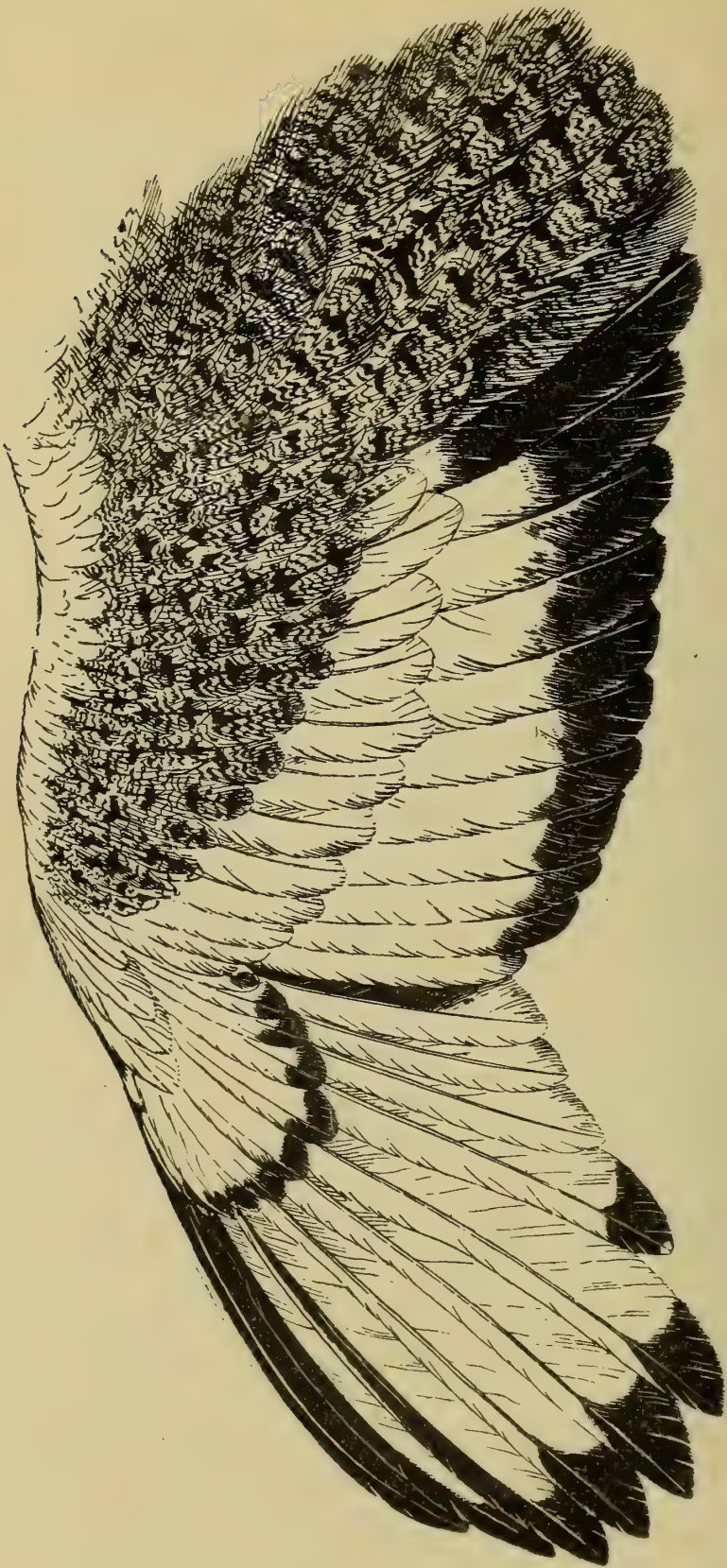
a, b. ♂ ♀. Fashoda, 22nd March. Nos. 174 & 175.

[This Crowned Crane was very numerous. It roosts in pairs, and, though generally one of the last birds to retire, starts off for its feeding-grounds just before dawn. It has a very aggravating cry, which sounds something like "go wack."—R. M. H.]

LISSOTIS LOMANI



Fig. 10.



Wing of *Lissotis lovati*.

Lissotis melanogaster.

British East Africa, Ravine, Mau (*Johnston*); Machakos (*Hinde*); Nyasaland (*White*); Mozambique (*Churchill*); Transvaal (*Ayres*); Durban (*Gordge*); Ambriz (*Monteiro*); Accra (*Buckley, Shelley, Smith, Ussher*).

Hab. British East Africa to South Africa, and thence northwards on the West Coast to Angola, the Gold Coast, and Senegambia.

165. *ÆDICNEMUS SENEGALENSIS.*

Ædicnemus senegalensis Swains.; Grant, *Ibis*, 1900, p. 327; Witherby, p. 277; N. C. Roths. & Wollast. p. 32; Oates, *Cat. Eggs Brit. Mus.* ii. pp. 82, 363 (1902).

a. ♀. 20 miles N. of Fashoda, 19th March. No. 150.

b. ♂. Near Renk, 13th May. No. 471.

Iris dark straw-coloured or yellow, granulated or veined with black on the outer edge; orbits yellow; bill black, greenish yellow at the base; legs and feet greenish grey or pale green.

[The Senegal Thick-knee was not a very common bird. We obtained a clutch of two eggs about 20 miles to the north of Fashoda.—R. M. H.]

166. *PLUVIANUS ÆGYPTIUS.*

Pluvianus ægyptius (Linn.); Grant, *Ibis*, 1900, p. 327; Witherby, p. 278; N. C. Roths. & Wollast. p. 33; Oates, *Cat. Eggs Brit. Mus.* ii. pp. 74, 361 (1902).

a. ♀. 20 miles N. of Fashoda, 19th March. No. 145.

b, c. ♂ ♀. Fashoda, 31st March. Nos. 259, 260.

Iris dark hazel; bill black; legs and feet blue.

[The Crocodile-bird was nowhere very numerous, but we managed to obtain a clutch of eggs. I had searched one small islet without finding any sign of them, and was engaged in searching another, when Mr. Cheetham called to me that he had found the eggs on the first islet. He had watched the birds through a glass from some distance after I had left, and had seen one of them scratch away the sand and sit down. He went to the place and found three eggs under the sand, the bird having again covered them before he got to the spot.—R. M. H.]

167. GLAREOLA PRATINCOLA.

Glareola pratincola (Linn.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 53 (1896); Witherby, p. 278.

a-d. ♂ ♀. Kaka, 3rd March. Nos. 101, 103-105.

Iris hazel; bill black, crimson at gape; legs and feet black.

[The Pratincole was fairly common, and generally seen in huge flocks on the islets of the White Nile. These flocks have a curious habit of rising and going through evolutions in the air, mounting up to a great height in a spiral. When I first saw one of these living spirals I thought that it was a "dust-devil" gone up to a great height, until I looked at it through a telescope. After the spiral manœuvre, the birds split up into several flocks and separate in different directions, eventually settling once more on an islet in the river.—R. M. H.]

168. PHYLLOPEZUS AFRICANUS.

Phyllopezus africanus (Gmel.); Grant & Reid, p. 689.

a. Ad. Kaka, 28th Feb. No. 79.

b-d. ♂ et ♀ imm. 20 miles N. of Fashoda, 19th Mar.-6th Apr. Nos. 142, 143, & 300.

Iris hazel; bill bluish grey on frontal plate, bluer on actual bill, and shading into dusky at the tip; legs and feet olive-brown.

[This Jacana was common along the banks of the river and the khors south of Abba Island.—R. M. H.]

Referring to the 'Catalogue of Birds' (xxiv. p. 68), I find that some error has crept in there, for the characters ascribed to *Phyllopezus* are not applicable either to *P. africanus* or *P. albinucha*, both of which possess a large flat shield attached posteriorly to the crown.

169. MICROPARRA CAPENSIS.

Microparra capensis (Smith); Sharpe, Cat. B. Brit. Mus. xxiv. p. 89 (1896).

a. ♂ imm. Fashoda, 31st March. No. 263.

Iris brown; bill olivaceous, darker at the tip; legs and feet olivaceous.

An immature bird with the crown of the head dull brown,

the rump blackish brown, and the tail white barred with black and slightly marked with chestnut.

The occurrence of this species at Fashoda extends its known range a long way to the north. Previously it had not been found further in that direction than Lake Naivasha in British East Africa.

[I only saw a single specimen of this little Jacana. It rose out of a khor along with several individuals of the larger African species.—R. M. H.]

170. *LOBIVANELLUS SENEGALLUS*.

Lobivanellus senegallus Linn.; Grant, Ibis, 1900, p. 328.

a, b. ♂. Fashoda, 29th March. Nos. 236, 237.

Iris yellow, granulated and veined with black; wattles bright yellow, red at the upper extremity; bill ochreous, black at tip; legs and feet ashen green.

The Senegal Wattled Lapwing was not procured either by Mr. Witherby or by Messrs. Rothschild and Wollaston.

171. *HOPLOPTERUS SPINOSUS*.

Hoplopterus spinosus (Linn.); Witherby, p. 277; Grant & Reid, p. 690; N. C. Roths. & Wollast. p. 32; Oates, Cat. Eggs Brit. Mus. ii. pp. 12, 345 (1902).

a, b. ♂. Kaka, 25th Feb. & 5th March. Nos. 72 & 106.

Iris crimson; bill, legs, and feet black.

[The Egyptian Spur-winged Plover was common.—R. M. H.]

172. *CHETTUSIA LEUCURA*.

Eurypterus leucurus (Licht.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 171 (1896).

Euhyas leucura (Licht.); Sharpe, Cat. B. Brit. Mus. xxiv. pp. x, 736 (1896).

a-e. ♀. Omdurman, 2nd Feb. Nos. 25–29.

Iris light brown; bill black; legs and feet gamboge-yellow.

It should be noted that the White-tailed Plover has the front of the metatarsus covered with transverse scales, and should therefore come under the heading *Lobivanellinae* (*cf.* Cat. B. Brit. Mus. xxiv. p. 90). I do not, however, believe that the scaling of the tarsus is of much value as a subfamily character.

173. *OCHTHODROMUS ASIATICUS.*

Ochthodromus asiaticus (Pall.); Witherby, p. 277; Grant & Reid, p. 691.

a, b. ♂ ♀ imm. Khartum, 23rd & 25th Jan. Nos. 2 & 6.
Iris dark hazel; bill black; legs and feet olivaceous or ochreous.

Two specimens of the Caspian Sand-Plover in immature plumage were procured.

174. *ÆGIALITIS HIATICOLA.*

Ægialitis hiaticola (Linn.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 256 (1896).

Ægialitis hiaticula (Linn.); Witherby, p. 277.

a. ♀. Fashoda, 21st March. No. 154.

A Ringed Plover in winter plumage has the iris brown, the bill black, yellow at the base, the legs and feet orange.

175. *ÆGIALITIS DUBIA.*

Ægialitis dubia Scop.; Grant & Reid, p. 692.

a, b. ♂ ♀. Fashoda, 29th March. Nos. 230 & 242.

Iris dark hazel; bill black, ochreous at base in the female; legs and feet ochreous yellow.

A pair of Little Ringed Plovers were in full breeding-plumage on the 29th of March.

176. *ÆGIALITIS PECUARIA.*

Ægialitis pecuaria (Temm.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 297 (1896).

a-c. ♂. Kaka, 8th March. Nos. 117-119.

Iris dark hazel; bill black; legs and feet ochreous yellow.

Of the three males of Kittlitz's Sand-Plover shot at Kaka, two have the wing-measurement 3·8 inches, and all the primary-quills partially white-shafted except the third; the third specimen has the wing 4·05 inches in length, and *only the first* primary-quill white-shafted. The last agrees with the birds from Cape Colony noted by Dr. Sharpe (*op. cit.* p. 299). This difference may be due to age.

177. *HIMANTOPUS HIMANTOPUS.*

Himantopus himantopus Linn.; Grant & Reid, p. 691.

Himantopus candidus Bonn.; Witherby, p. 277.

a, b. ♂. Kaka, 25th Feb. & 8th March. Nos. 71 & 116.

Iris black, with narrow scarlet border; bill black; legs and feet bright pink.

These males of the Black-winged Stilt, with the hinder part of the crown, feathers surrounding the eye, and ear-coverts blackish grey, are apparently fully adult birds in winter plumage.

178. *RECURVIROSTRA AVOCETTA.*

Recurvirostra avocetta Linn.; Sharpe, Cat. B. Brit. Mus. xxiv. p. 326 (1896).

a. ♀ vix ad. Fashoda, 22nd March. No. 167.

A nearly adult Avocet has the iris hazel, the bill black, the legs bluish grey, and the feet ochreous.

179. *NUMENIUS ARQUATA.*

Numenius arquata (Linn.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 341 (1896); Witherby, p. 277.

a. ♀. Ed-Duem, 21st May. No. 534.

Iris hazel; bill black, lighter at the base of the lower mandible; legs and feet slaty blue.

This female Curlew has an abnormally long bill, measuring 6·8 inches.

180. *LIMOSA LIMOSA.*

Limosa limosa (Linn.); Grant & Reid, p. 691.

Limosa belgica (Gmel.); Witherby, p. 277.

a. ♀. Khartum, 26th Jan. No. 23.

b. ♀. Fashoda, 31st March. No. 268.

c. ♀. Ed-Duem, 23rd May. No. 567.

Iris hazel; bill flesh-coloured, dusky or blackish at the tip; legs and feet black.

Though these three Black-tailed Godwits are all marked as females, I am inclined to think that specimens *b* and *c* may have been wrongly determined. In both of these the bill measures about 3·8 inches, while in specimen *a* it measures 4·7.

181. *TOTANUS CALIDRIS.*

Totanus calidris (Linn.); Witherby, p. 277; Grant & Reid, p. 693.

a. ♂. Ed-Duem, 23rd May. No. 562.

An immature male Redshank in very worn plumage has the iris hazel, the bill dusky, paler below, and the legs and feet red.

182. *TOTANUS STAGNATILIS.*

Totanus stagnatilis Bechst.; Grant & Reid, p. 693.

a-c. ♂ ♀. Kaka, 8th March. Nos. 113-115.

d, e. ♂ ♀. Fashoda, 26th & 30th March. Nos. 188 & 256.

Iris dark hazel; bill black; legs and feet pale olivaceous.

The Marsh-Sandpipers are in various stages of summer plumage, those shot at the end of March having practically completed the change.

183. *HELODROMAS OCHROPUS.*

Helodromas ochropus (Temm.); Grant & Reid, p. 692.

a. ♀. Fashoda, 29th March. No. 235.

A Green Sandpiper in breeding-plumage has the iris hazel, the bill black, and the legs and feet olivaceous.

184. *TRINGOIDES HYPOLEUCUS.*

Tringoides hypoleucus (Linn.); Grant & Reid, p. 692.

a. ♀ vix ad. Kaka, 5th March. No. 110.

A nearly adult Common Sandpiper has the iris hazel, the bill black, lighter at the base of the lower mandible, and the legs and feet olivaceous.

185. *GLOTTIS NEBULARIUS.*

Glottis nebularius (Gunn.); Grant, Ibis, 1900, p. 328.

a. ♂. Kaka, 3rd March. No. 100.

A Greenshank in winter plumage has the iris hazel, the bill black, brownish at the base of the lower mandible, and the legs and feet ashen green.

186. *PAVONCELLA PUGNAX.*

Pavoncella pugnax (Linn.); Grant & Reid, p. 693.

Machetes pugnax (Linn.); Witherby, p. 277.

a-g. ♂ ♀. Khartum, 24th-25th Jan. Nos. 2, 3, 4, 5, & 8.

h. ♀. Jebel Ahmed-Agha, 19th Feb. No. 59.

Iris dark hazel; bill black, dark flesh-coloured at the base in the males; legs and feet orange-yellow.

Two Ruffs, specimens *c* (No. 4) and *d* (No. 5), killed on

24th Jan., are remarkable: the former has the entire head and neck pure white, the latter has a white ring round the neck. Whether these birds are partial albinos in their ordinary winter plumage or males of the *white type* beginning to assume their summer plumage seems uncertain, but I am inclined to believe the former suggestion to be correct.

187. TRINGA MINUTA.

Tringa minuta Leisl.; Witherby, p. 277.

a. ♀. Khartum, 26th January. No. 22.

b, c. ♀. Omdurman, 2nd Feb. Nos. 30 & 31.

Iris dark hazel; legs and feet black.

The Little Stints are all in full winter plumage.

188. TRINGA SUBARQUATA.

Tringa subarquata (Güld.); Grant & Reid, p. 693.

a, b. ♂ ♀. Goz-Abu-Gumar, 19th May. Nos. 515 & 516.

Iris hazel; bill and legs black.

A pair of Curlew-Sandpipers are in full breeding-plumage.

189. *GALLINAGO GALLINULA.

Gallinago gallinula, Grant & Reid, p. 693.

[I shot a Jack-Snipe near Fashoda in April. It was very fat, and was the only one that I saw.—R. M. H.]

190. GALLINAGO GALLINAGO.

Gallinago gallinago (Linn.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 633 (1896).

a. ♂. Fashoda, 22nd March. No. 166.

A Snipe has the iris hazel, the bill dark grey, lighter at the base, and the legs and feet dark brown, greyish on the tarsi.

191. ROSTRATULA CAPENSIS.

Rostratula capensis (Linn.); Sharpe, Cat. B. Brit. Mus. xxiv. p. 683 (1896).

a, b. ♂. Fashoda, 31st March. Nos. 261 & 262.

Two male Painted Snipes have the iris hazel, the bill dusky, paler below, and the legs and feet dusky.

192. HYDROPROGNE CASPIA.

Hydroprogne caspia (Pall.) ; Saunders, Cat. B. Brit. Mus. xxv. p. 32 (1896).

Sterna caspia Pall. ; N. C. Roths. & Wollast. p. 30.

[I saw the Caspian Tern near Khartum and also up the White Nile, but it was not observed south of Abba Island.—R. M. H.]

193. HYDROCHELIDON LEUCOPTERA.

Hydrochelidon leucoptera (Schinz) ; Grant, Ibis, 1900, p. 330 ; Witherby, p. 274.

a. ♀. Kaka, 28th April. No. 407.

b. ? Goz-Abu-Gumar, 19th May. No. 514.

Specimen *a* of the White-winged Black Tern has partially attained the black summer plumage, while in *b* the change is complete. Both have the iris hazel, the bill black, and the legs dark red.

194. *HYDROCHELIDON NIGRA.

Hydrochelidon nigra (Linn.) ; Saunders, Cat. B. Brit. Mus. xxv. p. 17 (1896) ; Witherby, p. 274.

[Both *Hydrochelidon leucoptera* and *H. nigra* were common about Omdurman and as far south as Goz-Abu-Gumar.—R. M. H.]

195. GELOCHELIDON ANGLICA.

Gelochelidon anglica (Mont.) ; Grant & Reid, p. 694 ; N. C. Roths. & Wollast. p. 30.

Sterna anglica Mont. ; Witherby, p. 274.

a. ♂. Ed-Duem, 22nd May. No. 538.

The Gull-billed Tern has the iris dark hazel, the bill black, and the legs and feet brownish black.

196. *RHYNCHOPS FLAVIROSTRIS.

Rhynchops flavirostris Vieill. ; Saunders, Cat. B. Brit. Mus. xxv. p. 158 (1896).

[Scissor-billed Terns were not very common, and I never noticed them north of Abba Island.—R. M. H.]

197. *LARUS FUSCUS.

Larus fuscus Saunders, Cat. B. Brit. Mus. xxv. p. 250 (1896) ; Witherby, p. 274.

[I only saw one Lesser Black-backed Gull, near Ed-Duem.
—R. M. H.]

198. LIMNOCORAX NIGER.

Limnocorax niger (Gmel.) ; Grant & Reid, p. 694.

a, b. ♂ et ♂ imm. Kaka, 7th May. Nos. 444 & 445.

c, d. ♂ imm. Kaka, 18th April.

Iris crimson; bill greenish chrome; upper portion of eyelid coral-red; legs and feet dusky red, brighter at and above the tibio-tarsal joint.

[I only saw a few individuals of the Black Rail. Several times I heard it utter its cry in the flags, but could not flush it. Mr. Loat kindly gave me two skins which he had procured.—R. M. H.]

199. TURTUR DECIPIENS.

Turtur decipiens Finsch & Hartl. Vög. Ost-Afr. p. 544 (1870); Salvad. Cat. B. Brit. Mus. xxi. p. 420 (1893); N. C. Roths. & Wollast. p. 25.

Turtur ambiguus Bocage, Orn. Angola, p. 386 (1877); Salvad. Cat. B. Brit. Mus. xxi. p. 419 (1893); Witherby, p. 266.

a. ♂. Fashoda, 30th March. No. 255.

b. ♂. El-Kawa, 20th May. No. 525.

c-e. ♂ ♀. Ed-Duem, 22nd May. Nos. 542, 543, 559.

Iris yellow; bill vinaceous; legs and feet pinkish.

I think there can be no doubt that *T. decipiens* and *T. ambiguus* are synonymous. Mr. Witherby and Messrs. Rothschild and Wollaston have pointed out certain differences in the length of the wing and the width of the white tips to the tail-feathers, but, as will be seen by the following measurements, these characters appear to be sexual, not specific.

The specimen from Argo Island, Dongola (one of the types of *Columba collaris* Hempr. & Ehr.), which Count Salvadori in the 'Catalogue of Birds' refers to *C. decipiens*, appears to me to be an unusually rufous specimen of the bird that he calls *T. ambiguus*. It is in worn plumage, and

the unusually rufous tinge may be merely the result of weathering.

| Sex. | Wing. | Extent of white on tail (seen from below). | | Sex. | Wing. | Extent of white on tail (seen from below). | |
|-----------------------|-------|--|-----|--------------------------|-------|--|-----|
| | | in. | in. | | | in. | in. |
| ♂. Fashoda | 6·8 | 2·6 | | ♀. Ed-Duem | 6·4 | 2·3 | |
| ♂. Shendi | 6·8 | 2·5 | | ♀. Sobat | 6·4 | 2·0 | |
| ♂. El-Kawa | 6·7 | 2·5 | | ♀. Bahr Serhaf | 6·4 | 2·0 | |
| ♂ [sexed ♀] †. Shendi | 6·7 | 2·4 | | ♀. Tette | 6·4 | 1·9 | |
| ♂. Argo I., Dongola . | 6·7 | 2·4 | | ♀. Tette | 6·4 | 1·9 | |
| ♂. Ed-Duem | 6·6 | 2·2 | | ♀. Famaka | 6·3 | 2·1 | |
| ♂. Ed-Duem | 6·6 | 2·1 | | | | | |

[This species was very common indeed. Mr. Loat gave me a nest and eggs.—R. M. H.]

200. TURTUR TURTUR.

Turtur turtur (Linn.); Salvad. Cat. B. Brit. Mus. xxi. p. 396 (1893); N. C. Roths. & Wollast. p. 24.

Turtur communis Selby; Witherby, p. 266.

a. ♀. Ed-Duem, 22nd May. No. 555.

Iris hazel; bill black; legs vinaceous.

[The Common Turtle-Dove was very numerous.—R. M. H.]

201. TURTUR ROSEOGRISEUS.

Turtur roseogriseus (Sundev.); Grant, Novit. Zool. vii. p. 272 (1900); Witherby, p. 267; N. C. Roths. & Wollast. p. 25.

a. ♂ imm. Ed-Duem, 22nd May. No. 557.

Iris crimson; bill black; legs vinaceous.

[We found the Rose-grey Turtle-Dove much wilder and faster on the wing than *T. ambiguus*.—R. M. H.]

202. TURTUR SENEGALENSIS.

Turtur senegalensis (Linn.); Witherby, p. 267; Grant & Reid, p. 696; N. C. Roths. & Wollast. p. 26.

a. ♀. Kaka, 5th May. No. 436.

† I feel sure that the sex of this bird from Shendi has been wrongly determined.

b-d. ♂ ♀. Ed-Duem, 22nd & 23rd May. Nos. 544, 558, 565.

Iris hazel; bill black; legs and feet vinaceous.

[The Senegal Turtle-Dove was fairly common.—R. M. H.]

203. *CHALCOPELIA AFRA.*

Chalcopelia afra (Linn.); Witherby, p. 267; Grant & Reid, p. 697.

a. ♀. Kaka, 23rd April. No. 394.

b. Ad. Renk, 12th May. No. 467.

c, d. ♂ ♀. Goz-Abu-Gumar, 19th May. Nos. 498, 524.

e. ♂. Ed-Duem, 22nd May. No. 554.

Iris hazel; bill black in male, dusky in female; legs and feet vinaceous.

[The Metallic Spotted Dove is a very strong flyer. We found it common about Abba Island.—R. M. H.]

204. *ÆNA CAPENSIS.*

Æna capensis Linn.; Witherby, p. 267; Grant & Reid, p. 696; R. C. Roths. & Wollast. p. 26.

a. ♂. Fashoda, 1st April. No. 274.

Iris hazel; bill vinaceous, brownish at the tip; legs and feet vinaceous.

[The Long-tailed African Dove was very common south of Ed-Duem. I found it nesting in a garden at Khartum.—R. M. H.]

205. *PTEROCLURUS EXUSTUS.*

Pteroclorus exustus (Temm.); Witherby, p. 275; Grant, Ibis, 1901, p. 298; id. & Reid, p. 697.

Pterocles exustus Temm.; N. C. Roths. & Wollast. p. 31.

a, b. ♂ ♀. Ed-Duem, 22nd May. Nos. 535, 536.

Iris hazel; bill yellowish grey; feet yellowish white.

[We found the Common Pin-tailed Sand-Grouse very abundant from Khartum as far south as Ed-Duem.—R. M. H.]

206. *PTEROCLES QUADRICINCTUS.*

Pterocles quadricinctus Temm.; Grant, Ibis, 1900, p. 334.

a, b. ♂ ♀. Renk, 12th May. Nos. 469, 470.

Iris hazel; bill, legs, and feet reddish horn-coloured.

[I found the African Painted Sand-Grouse on the edge of the scrub near the river. I never noticed it south of Renk or north of Ed-Duem.—R. M. H.]

207. *FRANCOLINUS GEDGII*.

Francolinus gedgii Grant; Grant, Cat. B. Brit. Mus. xxii. p. 163 (1893).

Francolinus clappertoni, Reich. Vög. Afr. i. p. 480 (1901) [part., Lado, *Emin*].

a, b. ♂ ♀. 20 miles N. of Fashoda, 16th April. Nos. 365, 366.

Iris hazel; bill blackish horn-coloured, red at the base; bare skin surrounding eye red; legs purplish brown in front, red behind, paler in the female.

[Only one party of Gedge's Francolin was seen, near Fashoda.—R. M. H.]

The type of this species, an adult male, was obtained by Mr. E. Gedge on the Elgon Plains in 1890. It was not until last year that a female was shot by Capt. H. Bray at the junction of the Sobat River with the White Nile, and forwarded to the Museum. Lastly, Mr. Hawker secured a fine adult pair in freshly-moulted plumage a little further north.

The three birds from Fashoda and the mouth of the Sobat resemble one another and differ slightly from the type of *F. gedgii* in having the general colour of the lower back and rump greyish brown instead of dull olive-brown; the white margins to the feathers of the upper parts, which are confined to the sides of the feathers in the type, are sometimes almost confluent round the tip in the White Nile birds, which in this respect approach the allied *F. clappertoni*; the under-parts are nearly white, faintly tinged with buff on the breast only.

The differences are, however, very slight and may be individual; in any case, without more material it would be unsafe to separate the birds.

Fashoda is probably the northern limit of this species, its place being taken in Kordofan by the allied *F. clappertoni*.

I find that the two males procured by Dr. Ansorge in

Uganda and Unyoro, and referred to *F. gedgii* by Mr. Hartert (*cf.* Ansorge, *Under Afr. Sun*, App. p. 330), belong to *F. icterorhynchus* Heugl.

208. FRANCOLINUS CLAPPERTONI.

Francolinus clappertoni Childr. ; Grant, *Cat. B. Brit. Mus.* xxii. p. 162 (1893).

a, b. ♂ et ♂ vix ad. Goz-Abu-Gumar, 17th May. Nos. 488 & 489.

Iris hazel ; bill blackish horn-coloured, red at the base ; naked skin round eye red ; legs purplish brown in front, red behind.

These two males in freshly-moulted plumage agree perfectly with the type specimen, which was obtained in Bornu, and with a female procured by Petherick in Kordofan.

F. clappertoni may be distinguished from *F. gedgii* at a glance by the reddish and light olive-brown colour of the upper parts ; moreover in the present species the forehead is black and the top of the head dull reddish brown, while in *F. gedgii* the whole forehead and crown are brownish black, somewhat paler towards the nape.

[I saw only one covey of Clapperton's Francolin, south of Goz-Abu-Gumar.—R. M. H.]

209. *COTURNIX COTURNIX.

Coturnix coturnix (Linn.) ; Roths. & Wollast. p. 32.

[The Quail was twice met with singly.—R. M. H.]

210. NUMIDA PTILORHYNCHA.

Numida ptilorhyncha Licht. ; Grant, *Ibis*, 1900, p. 336 ; Witherby, p. 276.

a-c. ♂ ♀. Kaka, 23rd Feb.—25th March. Nos. 66, 67, & 74.

Iris hazel ; bill whitish horn-coloured, with a reddish patch at the base ; bare skin at the back of the skull purplish black, paler on the throat ; wattles and spots round the ears pale blue, shading into greyish on the margins of the wattles ; legs and feet black.

[We found the Abyssinian Helmeted Guinea-fowl in

large flocks all along the river, to which they come to drink, and noticed them feeding in the grass about fifteen miles from water. The Guinea-fowls shot had the nasal tuft of bristles very small, much smaller than in the specimens I formerly got in Somaliland.—R. M. H.]

The Somaliland bird [*N. somaliensis* Neumann, Orn. MB. vii. p. 25 (1899)], which is in my opinion perfectly distinct from *N. ptilorhyncha*, is united with that species by Reichenow [Vög. Afr. i. p. 445 (1901)].

N. somaliensis is distinguished by having the neck naked, with only a ring of black feathers at the base, and the bristles at the base of the culmen longer and more numerous, forming a much larger bunch than is usually found in *N. ptilorhyncha*. It should, however, be noted that in some examples of the latter species the bristles, though never so long as those of the Somali bird, are as numerous and form quite as large a bunch.

211. *STRUTHIO CAMELUS.

Struthio camelus Linn.; Salvad. Cat. B. Brit. Mus. xxvii. p. 572 (1895).

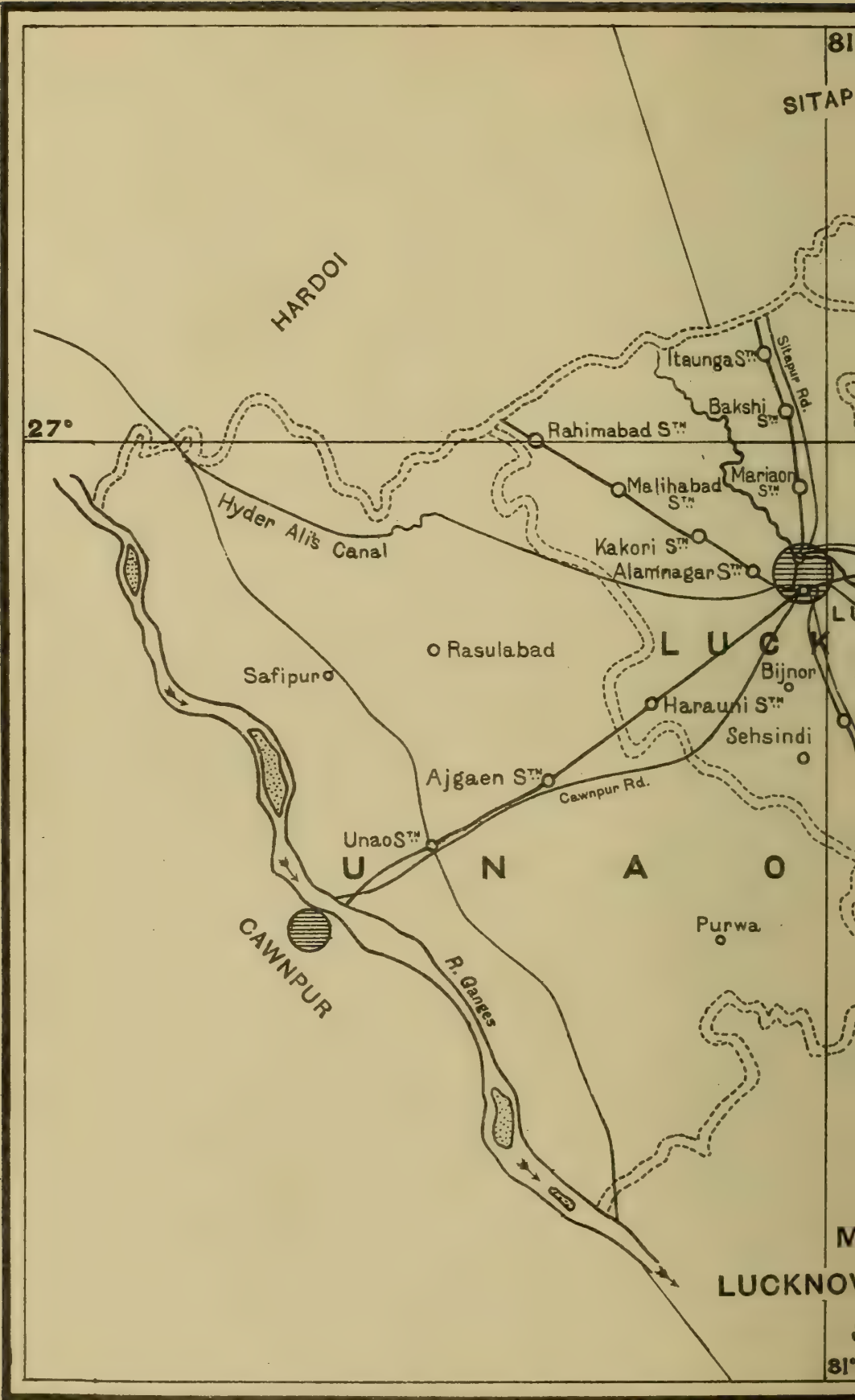
[I saw Ostriches on several occasions. The authorities at Khartum forbid the destruction of these birds, but the natives hunt them and search assiduously for their eggs. The Dinka women make curious waistbands out of circular pieces of the egg-shell about the size of a shilling, which are bored and strung. These they give to their men-folk, who seem to value them highly.—R. M. H.]

XXVII.—*A List of the Birds of Lucknow.* By WILLIAM JESSE, M.A., F.Z.S., M.B.O.U. (Member of the Bombay Natural History Society).

(Plate XII.)

INTRODUCTION.

IN compiling this list of the species of birds found round the capital of Oudh, I have had the exceptional advantage of being able to utilize the results of the labours of the late





Districts of
AND BARABANKI.
to an inch.

